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Personal and socio-economic profile of the aonla growers of Nagaur district

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Abstract

India has one of the largest and most complex public systems for generation, testing and transfer of agricultural information. It is the information behaviour of the farmers, which can promote and spread the results obtained in the laboratories for their better utilization in farming community. It can be concluded that majority of aonla growing farmers and farm women belonged to other backward caste and engaged both in agriculture and dairy. They had no social participation with 1.0-2.5 ha land area and medium farm power. They lived in either big or joint family, 5-10 years of farming experience and medium annual income were other characteristics. These aonla growing farmers and farm women also attainted short duration (one day) off campus training, had high innovation proneness, medium economic motivation, orientation towards competition, managed in medium manner and aonla growing farmers were educated up to middle school level, however, aonla growing farm women were illiterate. The Semi-Arid Eastern Plains Zone (IIIa) of Rajasthan has highest area and production under aonla cultivation. There are so many agricultural institutions, which are engaged in the research on aonla growers problems and transfer of technology to the aonla growers.

Keywords: Training, innovation, proneness, economic, motivation, orientation, attitude, risk, management and participation

Introduction

An improvement and strengthening of agricultural infrastructure needed to all the levels of supply chain. Shrinking extension is another component of infrastructure that needs attention. After the green revolution in the mid-sixties there has been no major technological innovation, which could give a fresh impetus to agricultural productivity, insufficient extension services and poor access to information further widen the gap in the adoption of technology and lead to poor productivity levels. A push towards higher productivity will require information based, decision making agricultural system. This is often described as the next great evolutionary step in agriculture. Today's farmers desire not only the meals for their families from their hard sweat but also surplus production which can be sold in the market to get sufficient money to fulfill the daily requirements. According to economic reforms in the country, each and every sector has changed its strategies in view of global competition.

The rapid changes in technological innovations, fluctuating economic trends, changing policy initiatives and several uncertain factors operating in the production and marketing environment have made the decision-making task of farmers exceedingly complex. In order to minimize the risk in decision-making, availability and access to accurate, reliable and timely information becomes all the more important. It provides the means by which problems are recognized, defined and eventually solved. If the information is better, complete, accurate, more reliable and timely available, it is easier for farmers to make a right and rational decision.

Materials and Methods

Sixteen variables namely, Caste, Occupation, Education level, Social participation, Size of land holding, Farm power, Family type, Family size, Farming experience, Annual income, Training received, Innovation proneness, Economic motivation, Orientation towards competition, Attitude towards modern agriculture, Risk orientation and Management orientation were identified as the important variables which might affect the agriculture information management behaviour of aonla growers. These variables were identified on the basis of pilot study conducted in the area under investigation and by concerning the review of literature. The measurement procedure of these independent variables is described as under.

1. Caste

Caste of aonla growers was measured by using the socio-economic status scale developed by Trivedi (1963) [13] with due modifications taking into consideration the state government regulations and suggestions of the experts and scoring was done accordingly.

2. Occupation

The occupation of aonla growers was measured by the scale developed by Trivedi (1963) [13] and as per the scale the occupation of the respondents was measured into four categories namely labour, dairy/agriculture, business and service with a score of 1, 3, 4 and 5 respectively.

3. Education level

Education level of aonla growers was measured by using the

socio-economic status scale developed by Trivedi (1963) [13] and scoring was done as per the scale the education level of the respondents was measured into eight categories namely illiterate, can read only, can read and write, primary, middle, high school, graduate and above graduate with a score of 1, 2, 3, 4, 5, 6, 7 and 8 respectively.

4. Social participation

The social participation of aonla growers was also measured by the socio-economic status scale developed by Trivedi (1963) [13] and scoring was done accordingly. As per the scale the social participation of the respondents was measured into five categories namely no participation, member of one organization, member of more than one organization, office holders and public leader/M.P./M.L.A. with a score of 0,1,2,3 and 4 respectively.

5. Size of land holding

The size of land holding of aonla growers was measured by the scale developed by Trivedi (1963) [13] and as per the scale the size of land holding of the respondents was measured into eight categories namely, no land, less than 1 ha., 1 to 2.5 ha., 2.6 to 4.0 ha., 4.1 to 6.0 ha., 6.1 to 8.0 ha., 8.1 to 10 ha. and More than 10 ha. with a score of 1,2,3,4,5,6,7 and 8 respectively.

6. Farm power

It was also measured by the socio-economic status scale developed by Trivedi (1963) [13] and the scoring was done accordingly. Then the aonla growers were further classified into five categories based on the percentage of farm power as follows.

7. Family types

The type of family of the aonla growers was measured by the scale developed by Trivedi (1963) [13] and as per the scale the composition of the family of respondents was classified into two types namely nuclear family and joint family with a score of 1 and 2 respectively.

8. Family size

The size of family of aonla growers was measured by the scale developed by Trivedi (1963) [13] and as per the scale the families of the respondents were categorized into two groups namely small family and big family with a score of 1 and 2 respectively.

9. Farming experience

The farming experience of the family was measured by the schedule developed by the investigator in line of the suggestions of the experts. As per the schedule farming experience of the respondents was measured into four categories namely less than 5 years, 5-10 years, 10-15 years and more than 15 years with a score of 1, 2, 3 and 4 respectively.

10. Annual income

The annual income of the family was measured by the schedule developed by the investigator in line of the suggestions of the experts and on the basis of mean and standard deviation, the respondents were classified into three categories namely low annual income (mean - SD), medium annual income (mean $\pm$ SD) and high annual income (mean + SD).

11. Training received

The training received by the aonla growers was measured by the schedule developed by Yadav (2002) [14] with little modification as suggested by the experts. As per the scale the respondents were asked to indicate the number and duration of training received by them during last three years about aonla cultivation technology. The training received of the respondents was classified into four categories namely one day training, 1-3 days training, 4-6 days training and More than 6 days training with a score of 1, 2, 3 and 4 respectively.

12. Innovation proneness

It was measured by using the scale developed by Feaster (1960) [19] This scale consists of eight statements and the responses of the farmers were obtained against three point continuum *i.e.* 'Yes', 'undecided', and 'No' with the score of 2,1 and 0 respectively.

13. Economic motivation

To measure the economic motivation of the aonla growers the scale developed by Supe (1969) [15] was used. This scale consists of six statements and the responses of the farmers were obtained against five point continuum *i.e.* 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with the score of 5, 4, 3, 2 and 1 respectively.

14. Orientation towards competition

To measure the orientation towards competition of the aonla growers the scale developed by Singh (1987) [16] was used. This scale consists of six statements and the responses of the farmers were obtained against four point continuum *i.e.* 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with the score of 4, 3, 2 and 1 respectively.

15. Attitude towards modern agriculture:-

To measure the attitude towards modern agriculture of the aonla growers the scale developed by Singh (1990) [17] was used. This scale consists of eighth statements and the responses of the farmers were obtained against five point continuum *i.e.* 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with the score of 4, 3, 2,1 and 0 respectively.

16. Risk Orientation

It is the degree to which a respondent is oriented towards risk and uncertainty and has the courage to solve or overcome the problem in enterprise management. Nagaraja (1989) [18] developed the scale for measuring risk orientation of aonla growers. This scale consists of six statements and the responses of the farmers were obtained against four point continuum *i.e.* 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with the score of 4, 3, 2 and 1 respectively.

17. Management Orientation

This scale consists of eleven statements and the responses of the farmers were obtained against five point continuum *i.e.* 'strongly agree', 'agree', 'undecided', 'disagree' and

'strongly disagree' with the score of 4, 3, 2,1 and 0 respectively

Results and Discussion

In this section, an attempt has been made to record the data regarding the personal and socio-economic profile of the aonla growers including their personal characteristics during the investigation was made. The findings recorded to the personal characteristics of the respondents like caste, occupation, education, social participation, size of land holding, farm power, family size, farming experience, annual income, training received, innovation proneness, economic motivation, orientation towards competition, attitude towards modern agriculture, risk orientation and management orientation have been presented in the following sections.

1. Caste

The data presented in Table 1 indicated that majority of the aonla growing farmers and farm women (52.50 and 51.67 percent respectively) belonged to other backward caste, whereas 31.67 percent each of aonla growing farmers as well as farm women belonged to general caste. Only 6.67 percent aonla growing farmers and 5.83 percent aonla growing farm women belonged to scheduled caste. None of the aonla growing farmers and farm women belonged to special backward caste or other caste.

Table 1: Distribution of aonla growing farmers and farm women according to their caste

N=240

S. No.	Caste	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Scheduled tribe	8 (10.00)	9 (11.25)	3 (7.50)	4 (10.00)	11 (9.16)	13 (10.83)
2.	Scheduled caste	6 (7.50)	4 (5.00)	2 (5.00)	3 (7.50)	8 (6.67)	7 (5.83)
3.	Other backward caste	42 (52.50)	42 (52.50)	21 (52.50)	20 (50.00)	63 (52.50)	62 (51.67)
4	General caste	24 (30.00)	25 (31.25)	14 35.00	13 (32.50)	38 (31.67)	38 (31.67)
5	Special backward caste	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
6	Other caste	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

x^2 =71.54 d.f. = 5 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 71.54, which is more than its tabulated value (11.07) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to their caste.

From the above findings it could be concluded that majority of the farmers and farm women of aonla growers belonged to the category of other backward caste followed by scheduled caste. This might be due to dominancy of these communities (castes) in the area.

2. Occupation

The data presented in Table 2 indicated that majority of the aonla growing farmers and farm women (59.17 and 88.33 percent respectively) were associated with dairy/agriculture occupation, whereas 12.50 percent aonla growing farmers and 11.67 percent farm women were labourer. Only 17.50 percent aonla growing farmers and none of the aonla growing farm women were from business. Whereas 10.83 percent aonla growing farmers and none of the aonla growing farm women belonged to services category.

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 117.6, which is more than its tabulated value (7.82) at 5 percent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted. This leads a highly significant agreement between the aonla growing farmers and farm women with regard to their occupation.

It could be concluded from these findings that majority of the farmers and farm women of aonla growers were involved in dairy/Agriculture occupation which might be due to the reason that majority of them were having requisite land holdings to carry out agricultural activities.

Table 2: Distribution of aonla growing farmers and farm women according to their occupation

N=240

S. No.	Occupation	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Labour	9 (11.25)	7 (8.75)	6 (15.00)	7 (17.50)	15 (12.50)	14 (11.67)
2.	Dairy/Agriculture	46 (57.50)	73 (91.25)	25 (62.50)	33 (82.50)	71 (59.17)	106 (88.33)
3.	Business	17 (21.25)	0 (0.00)	4 (10.00)	0 (0.00)	21 (17.50)	0 (0.00)
4	Services	8 (10.00)	0 (0.00)	5 12.50)	0 (0.00)	13 (10.83)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 =117.6 d.f. = 3 Figures in parentheses indicate percentage

3. Education

The data in Table 3 indicated that majority of aonla growing farmers (29.20 percent) were educated up to Middle school level whereas majority of farm women (24.17 percent) were illiterate. Whereas, 10.80 percent and 5.83 percent aonla growing farmers and none of the farm women was found in graduate and above graduate.

Table 3: Distribution of aonla growing farmers and farm women according to their education

N=240

S. No.	Education	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Illiterate	0 (0.00)	20 (25.00)	0 (0.00)	9 (22.50)	0 (0.00)	29 (24.17)
2.	Can read only	3 (3.75)	13 (16.25)	0 (0.00)	7 (17.50)	3 (2.50)	20 (16.67)
3.	Can read and write	8 (10.00)	10 (12.50)	3 (7.50)	6 (15.00)	11 (9.17)	16 (13.33)
4	Primary School	16 (20.00)	18 (22.50)	7 (17.50)	9 (22.50)	23 (19.20)	27 (22.50)
5	Middle school	22 (27.50)	14 (17.50)	13 (32.50)	5 (12.50)	35 (29.20)	19 (15.83)
6	High School	18 (22.50)	5 (6.25)	10 (25.00)	4 (10.00)	28 (23.30)	9 (7.50)
7	Graduate	8 (10.00)	0 (0.00)	5 (12.50)	0 (0.00)	13 (10.80)	0 (0.00)
8	Above graduate	5 (6.25)	0 (0.00)	2 (5.00)	0 (0.00)	7 (5.83)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 63.4 d.f. = 7 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 63.4, which is more than its tabulated value (14.07) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with to their educational qualification.

The probable reason for this finding may be that the aonla growers might have been benefited with the existing educational facilities prevailing in the area. Hence, majority of the aonla growing farmers were educated up to middle school level and farm women were educated up to primary school level.

4. Social participation

The data presented in Table 4 indicated that majority of the aonla growing farmers and farm women (82.50 percent and 92.50 percent respectively) were having no participation in social system. Whereas, 2.50 percent aonla growing farmers and 7.50 percent farm women were having Member of one organization. Only 0.83 percent, 10.83 percent and 3.33 percent aonla growing farmers and none of the farm women were having member of more than one organizations, office holders and Public leader/M.P./M.L.A.

Table 4: Distribution of aonla growing farmers and farm women according to their social participation

N=240

S. No.	Social participation	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	No participation	66 (82.50)	75 (93.75)	33 (82.50)	36 (90.00)	99 (82.50)	111 (92.50)
2.	Member of one organization	2 (2.50)	5 (6.25)	1 (2.50)	4 (10.00)	3 (2.50)	9 (7.50)
3.	Member of more than one organization	1 (1.25)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.83)	0 (0.00)
4	Office holders	8 (10.00)	0 (0.00)	5 (12.50)	0 (0.00)	13 (10.83)	0 (0.00)
5	Public leader/M.P./M.L.A.	3 (3.75)	0 (0.00)	1 (2.50)	0 (0.00)	4 (3.33)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 =225.72 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 225.72, which is more than its tabulated value (9.49) at 5 percent level of significance. Which rejected the null hypothesis and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women to their Social participation.

As the results emerged out from the study, majority of aonla growing farmers and farm women had no participation in social system. It might be due to lack of awareness of aonla growers about activities of social institutions, mobility to devote time, more busy with their crop management etc.

5. Size of land holding

The data presented in Table 5 clearly indicated that majority of the aonla growing farmers and farm women (50.00 percent and 41.67 percent respectively) were having 1-2.5 ha land area. Whereas, 20.00 percent aonla growing farmers and 27.50 percent farm women were having 2.6-4.0 ha land area. However, none of the aonla growing farmers and farm women were having no land area.

Table 5: Distribution of aonla growing farmers and farm women according to their size of land holding

N=240

S. No.	Size of land holding	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	No land	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Less than 1 ha	0 (0.00)	0 (0.00)	10 (25.00)	12 (30.00)	10 (8.83)	12 (10.00)
3.	1-2.5 ha	40 (50.00)	32 (40.00)	20 (50.00)	18 (45.00)	60 (50.00)	50 (41.67)
4	2.6-4.0 ha	20 (25.00)	28 (35.00)	4 (10.00)	5 (12.50)	24 (20.00)	33 (27.50)
5	4.1-6.0 ha	8 (10.00)	10 (12.50)	3 (7.50)	4 (10.00)	11 (9.17)	14 (11.67)
6	6.1-8.0 ha	6 (7.50)	4 (5.00)	2 (5.00)	1 (2.50)	8 (6.67)	5 (4.17)
7	8.1-10 ha	4 (5.00)	4 (5.00)	1 (2.50)	0 (0.00)	5 (4.17)	4 (3.33)
8	More than 10 ha	2 (2.50)	2 (2.50)	0 (0.00)	0 (0.00)	2 (1.67)	2 (1.67)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 218.33 d.f. = 7 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 218.33, which is more than its tabulated value (14.07) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. Which results a highly significant agreement between the aonla growing farmers and farm women with regard to their size of land holding?

The reason may be that the parents used to give a part of land as a share to their children after their marriage. This continuous fragmentation process resulted emergence of large number of nuclear families that divides the ancestral property might had caused the reduction in the land holding of families. Industrialization and urbanization may also be the potent reasons for reducing per capita availability of land.

6. Farm power

The data presented in Table 6 indicated that majority of the aonla growing farmers and farm women (53.33 percent and 44.17 percent respectively) had medium level (40-60 percent) of farm power. Whereas, 2.50 percent farmers and 1.67 percent aonla growing farm women had very high level of farm power i.e. 80-100 percent.

Table 6: Distribution of aonla growing farmers and farm women according to their farm power

N=240

S. No.	Farm power	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	10 (12.50)	9 (11.25)	3 (7.50)	4 (10.00)	13 (10.83)	13 (10.83)
2.	Low (20-40 percent)	19 (23.75)	19 (23.75)	7 (17.50)	6 (15.00)	26 (21.67)	25 (20.83)
3.	Medium (40-60 percent)	42 (52.50)	26 (32.50)	22 (55.00)	27 (67.50)	64 (53.33)	53 (44.17)
4	High (60-80 percent)	8 (10.00)	24 (30.00)	6 (15.00)	3 (7.50)	14 (11.67)	27 (22.50)
5	Very high (80-100 percent)	1 (1.25)	2 (2.50)	2 (5.00)	0 (0.00)	3 (2.50)	2 (1.67)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 70.92 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 70.92, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads a highly significant agreement between the aonla growing farmers and farm women with regard to their level of farm power.

7. Types of family

The data presented in table 7 indicated that majority of the aonla growing farmers and farm women (62.50 percent and 65.00 percent respectively) belonged from Joint family, whereas 37.50 percent aonla growing farmers and 35.00 percent farm women were belonged to Nuclear family.

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 8.7, which was more than its tabulated value (3.84) at 5 percent level of significance. Therefore the null hypothesis was rejected and alternate hypothesis was accepted. This resulted a highly significant agreement between the aonla growing farmers and farm women with regard to their types of family.

Table 7: Distribution of aonla growing farmer and farm women according to their types of family

N=240

S. No.	Types of family	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Nuclear family	30 (37.50)	29 (36.25)	15 (37.50)	13 (32.50)	45 (37.50)	42 (35.00)
2.	Joint family	50 (62.50)	51 (63.75)	25 (62.50)	27 (67.50)	75 (62.50)	78 (65.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 8.7 d.f. = 1 Figures in parentheses indicate percentage

From the above findings it could be concluded that majority of the aonla growers belonged to Joint family, whereas very few of them belonged to Nuclear family. This might be due to the reason that most of the women belonged to the rural areas, due to which most of the rural women might have preferred to live in Joint family, because in rural areas there is a culture of living in joint family and the aonla growers living in joint families are considered ideal women for family.

8. Size of family

The data presented in Table 8 indicated that majority of the aonla growing farmers and farm women (73.33 percent and 67.50 percent respectively) belonged to big families having more than 5 members, The remaining aonla growing farmers and farm women (26.67 percent and 32.50 percent respectively) were reported to be from small families having less than 5 members.

Similarly the calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 20.04, which is more than its tabulated value (3.84) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This resulted a highly significant agreement between the aonla growing farmers and farm women in respect to their size of family.

From the above findings it could be concluded that majority of the aonla growers belonged to Big families (having more than 5 members), which might be due to the reason of following Joint family norms, because in rural areas joint

families are considered ideal type of families in villages, hence most of the aonla growers preferred to live joint families, resulting in large size of families.

Table 8: Distribution of aonla growing farmers and farm women according to their family size

N=240

S. No.	Family	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Small family (Up to 5 members)	20 (25.00)	25 (31.25)	12 (30.00)	14 (35.00)	32 (26.67)	39 (32.50)
2.	Big family (More than 5 members)	60 (75.00)	55 (68.75)	28 (70.00)	26 (65.00)	88 (73.33)	81 (67.50)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 20.04 d.f.= 1 Figures in parentheses indicate percentage

9. Farming experience

The data presented in Table 9 indicated that majority of farmers and farm women (74.17 percent and 77.50 percent respectively) had 5-10 years of farming experience, whereas 14.17 percent aonla growing farmers and 15.00 percent farm women had less than 5 years of farming experience. None of the aonla growing farmers and farm women had more than 15 years of farming experience.

Table 9: Distribution of aonla growing farmers and farm women according to their farming experience

N=240

S. No.	Farming experience	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Less than 5 years	12 (15.00)	10 (8.00)	5 (12.50)	8 (20.00)	17 (14.17)	18 (15.00)
2.	5-10 years	60 (75.00)	65 (81.25)	29 (72.50)	28 (70.00)	89 (74.17)	93 (77.50)
3.	10-15 years	8 (10.00)	5 (6.25)	6 (7.50)	4 (10.00)	14 (11.67)	9 (7.50)
4	More than 15 years	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 205.92 d.f.= 3 Figures in parentheses indicate percentage

The results showed that the calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 205.92, which is more than its tabulated value (7.82) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to their Farming experience.

10. Annual income

The data presented in Table 10 indicated that majority of aonla growing farmers and farm women (65.83 percent and 62.50 percent respectively) were having medium annual family income, whereas only 20.00 percent aonla growing farmers and 6.67 percent farm women were having high annual family income. 14.17 percent aonla growing farmers and 30.83 percent farm women were having low annual family income.

Table 10: Distribution of aonla growing farmer and farm women according to their annual income

N=240

S. No.	Annual income	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Low (Below Rs.117094.09)	7 (8.75)	21 (26.25)	10 (25.00)	16 (40.00)	17 (14.17)	37 (30.83)
2.	Medium (Rs.117094.09 to Rs. 272993.73)	55 (68.75)	56 (70.00)	24 (60.00)	19 (47.50)	79 (65.83)	75 (62.50)
3.	High (Above Rs. 272993.73)	18 (22.50)	3 (3.75)	6 (15.00)	5 (12.50)	24 (20.00)	8 (6.67)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

$\overline{X}$ = 195043.91σ = 77949.817 χ^2 = 105.7 d.f = 2 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women were found to be 105.7, which is more than its tabulated value (5.99) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted, which indicates a highly significant agreement between the aonla growing farmers and farm women with regard to their annual family income.

The probable reason for varied level of annual family income might be due to the difference in productivity of land, price fluctuation in market and variation in the cultural operations of aonla.

11. Trainings Received

The data presented in Table 11 revealed that majority of aonla growing farmers and farm women (66.67 percent and 71.67 percent respectively) had attained short duration off campus (one day) training, whereas only 22.50 percent aonla growing farmers and 21.67 percent farm women had attained short duration on campus (1-3 days) training.

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 128.93, which is more than its tabulated value (7.82) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to attending the "on" and 'off" campus training programmes.

Table 11: Distribution of aonla growing farmers and farm women according to their trainings received

N=240

S. No.	Trainings received	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Short duration off campus (one day)	50 (62.50)	54 (67.50)	30 (75.00)	32 (80.00)	80 (66.67)	86 (71.67)
2.	Short duration on campus (1-3 days)	21 (26.25)	20 (25.00)	6 (15.00)	6 (15.00)	27 (22.50)	26 (21.67)
3.	Short duration (4-6 days)	9 (11.25)	6 (7.50)	4 (10.00)	2 (5.00)	13 (10.83)	8 (6.66)
4	Long duration (more than 6 days)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 128.93 d.f.= 3 Figures in parentheses indicate percentage

The findings might be due to the reason that most of the time the trainings are organized to complete the targets of trainings that's why the rural women who want to attend training might be busy in their farm activities, due to which they might not be able to attend the trainings and the women who did not require might get a chance to participate in the trainings organized by different institutions.

12. Innovation proneness

The data in Table 12 indicated that majority of the aonla growing farmers and farm women (46.67 percent and 44.17 percent respectively) were having high Innovation proneness, whereas 33.33 percent aonla growing farmers and 37.50 percent farm women were having medium Innovation proneness. Only 5.83 percent aonla growing farmers and 8.33 percent farm women were having low Innovation proneness. Results showed that none of the aonla growing farmers and farm women were having very low Innovation proneness.

Table 12: Distribution of aonla growing farmers and farm women according to their innovation proneness

N=240

S. No.	Innovation proneness	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Low (20-40 percent)	2 (2.50)	3 (3.75)	5 (12.50)	7 (17.50)	7 (5.83)	10 (8.33)
3.	Medium (40-60 percent)	19 (23.75)	24 (30.00)	21 (52.50)	21 (52.50)	40 (33.33)	45 (37.50)
4	High (60-80 percent)	45 (56.25)	43 (53.75)	11 (27.50)	10 (25.00)	56 (46.67)	53 (44.17)
5	Very high (80-100 percent)	14 (17.50)	10 (12.50)	3 (7.50)	2 (5.00)	17 (14.17)	12 (10.00)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 101.47 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 101.47, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to their innovation proneness.

13. Economic motivation

The data presented in Table 13 indicated that majority of the aonla growing farmers and farm women (55.00 percent and 54.17 percent respectively) were having medium economic motivation. None of the aonla growing farmers and 0.83 percent farm women were having very low economic motivation.

Table 13: Distribution of aonla growing farmers and farm women according to their economic motivation

N=240

S. No.	Economic motivation	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.50)	0 (0.00)	1 (0.83)
2.	Low (20-40 percent)	2 (2.50)	3 (3.75	7 (17.50)	4 (10.00)	9 (7.50)	10 (8.33)
3.	Medium (40-60 percent)	45 (56.25)	44 (55.00)	21 (52.50)	26 (65.00)	66 (55.00)	65 (54.17)
4	High (60-80 percent)	28 (35.00)	29 (36.25)	10 (25.00)	9 (22.50)	38 (31.67)	39 (32.50)
5	Very high (80-100 percent)	5 (6.25)	4 (5.00)	2 (5.00)	0 (0.00)	7 (5.83)	4 (3.33)
	Total	80 (100.00)	80 (100.000	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 125.85 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 125.85, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and accepted the alternate hypothesis which indicates a highly significant agreement between the aonla growing farmers and farm women as per their economic motivation are concerned.

Horticulture crop growers especially aonla growers were found to be more profit motive this may be the probable reason for medium to high economic motivation of aonla growers.

14. Orientation towards competition

The data presented in Table 14 indicated that majority of the aonla growing farmers and farm women (46.67 percent and 48.33 percent respectively) were having high orientation i.e. 60-80 percent towards competition. None of the aonla growing farmers and farm women were having very low orientation towards competition.

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 151.74, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to their orientation towards competition.

The probable reason for the finding might be because of lack of concerted efforts by the government agencies regarding the recognition of aonla growers for their excellence in farming, which might have led them for high level orientation towards competition.

Table 14: Distribution of aonla growing farmers and farm women according to their orientation towards competition

N=240

S. No.	Orientation towards competition	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Low (20-40 percent)	1 (1.25)	2 (2.50)	4 (10.00)	11 (27.50)	5 (4.17)	6 (5.00)
3.	Medium (40-60 percent)	33 (41.25)	33 (41.25)	21 (52.50)	19 (47.50)	54 (45.00)	54 (45.00)
4	High (60-80 percent)	42 (52.50)	44 (55.00)	14 (35.00)	8 (20.00)	56 (46.67)	58 (48.33)
5	Very high (80-100 percent)	4 (5.00)	1 (1.25)	1 (2.50)	2 (5.00)	5 (4.17)	2 (1.67)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 151.74 d.f.= 4 Figures in parentheses indicate percentage

15. Attitude towards modern agriculture

The data presented in Table 15 indicated that majority of the aonla growing farmers and farm women (50.00 percent and 51.70 percent respectively) were having medium attitude towards modern agriculture, whereas 28.33 percent aonla growing farmers and 25.00 percent farm women were having high attitude towards modern agriculture. Whereas only 1.67 percent aonla growing farmers as well farm women were having very high attitude towards modern agriculture.

Table 15: Distribution of aonla growing farmers and farm women according to their attitude towards modern agriculture

N=240

S. No.	Attitude towards modern agriculture	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	1 (1.25)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.83)
2.	Low (20-40 percent)	15 (18.75)	14 (17.50)	9 (22.50)	11 (27.50)	24 (20.00)	25 (20.80)
3.	Medium (40-60 percent)	41 (51.25)	43 (53.75)	19 (47.50)	19 (47.50)	60 (50.00)	62 (51.70)
4	High (60-80 percent)	24 (30.00)	22 (27.50)	10 (25.00)	8 (20.00)	34 (28.33)	30 (25.00)
5	Very high (80-100 percent)	0 (0.00)	0 (0.00)	2 (5.00)	2 (5.00)	2 (1.67)	2 (1.67)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 116.82 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 116.82, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This results a highly significant agreement between the aonla growing farmers and farm women to their attitude towards modern agriculture.

16. Risk orientation

The data presented in Table 16 indicated that 47.00 percent aonla growing farmers and 46.00 percent aonla growing farm women were having medium risk orientation, whereas 33.00 percent aonla growing farmers and 39.00 percent farm women were having high risk orientation. Only 2.50 percent aonla growing farmers and 0.83 percent farm women were having very high risk orientation. None of the aonla growing farmers and farm women were having very low risk orientation.

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 121.90, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women to their risk orientation.

Table 16: Distribution of aonla growing farmers and farm women according to their risk orientation

N=240

S. No.	Risk orientation	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Low (20-40 percent)	14 (17.50)	8 (10.00)	8 (20.00)	9 (22.50)	22 (18.00)	17 (14.00)
3.	Medium (40-60 percent)	37 (46.25)	35 (44.00)	19 (48.00)	20 (50.00)	56 (47.00)	55 (46.00)
4	High (60-80 percent)	28 (35.00)	37 (46.00)	11 (28.00)	10 (25.00)	39 (33.00)	47 (39.00)
5	Very high (80-100 percent)	1 (1.25)	0 (0.00)	2 (5.00)	1 (2.50)	3 (2.50)	1 (0.83)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 =121.9 d.f.= 4 Figures in parentheses indicate percentage

Studies in the developing countries had shown that individuals vary in their willingness to take risk. Beal and Sibley (1967) reported that an individual perceives a high degree of risk in innovation may not be intended to acquire sufficient information. It can be concluded that a large majority of the aonla growers had medium level of risk orientation. The reason for above situation might be due to better annual income, medium farm size and cultivation of more than one horticultural crops. Moreover, higher education and economic status might have helped them for

taking risk in different operations of aonla cultivation.

17. Management orientation

The data presented in Table 17 indicated that majority of the aonla growing farmers and farm women (63.00 percent and 66.00 percent respectively) were having medium management orientation, followed by high management orientation of 30.00 percent aonla growing farmers and 27.00 percent farm women. However only 1.70 percent aonla growing farmers were having low management orientation and 3.30 percent aonla growing farm women were having very high management orientation. None of the aonla growing farmers and farm women were having very low management orientation.

Table 17: Distribution of aonla growing farmers and farm women according to their management orientation

N=240

S. No.	Management orientation	Jaipur district (n=160)		Ajmer district (n=80)		Total respondents (N=240)	
		Farmers (n=80)	Farm women (n=80)	Farmers (n=40)	Farm women (n=40)	Farmers (n=120)	Farm women (n=120)
1.	Very Low (0-20 percent)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Low (20-40 percent)	1 (1.25)	4 (5.00)	1 (2.50)	1 (2.50)	2 (1.70)	5 (4.20)
3.	Medium (40-60 percent)	53 (66.25)	54 (67.50)	23 (58.00)	25 (62.50)	76 (63.00)	79 (66.00)
4	High (60-80 percent)	23 (28.75)	20 (25.00)	13 (33.00)	12 (30.00)	36 (30.00)	32 (27.00)
5	Very high (80-100 percent)	3 (3.75)	2 (2.50)	3 (7.50)	2 (5.00)	6 (5.00)	4 (3.30)
	Total	80 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	120 (100.00)	120 (100.00)

χ^2 = 163.31 d.f.= 4 Figures in parentheses indicate percentage

The calculated value of chi-square (χ^2) test between the scores of aonla growing farmers and farm women was found to be 163.31, which is more than its tabulated value (9.49) at 5 percent level of significance. Hence the null hypothesis was rejected and alternate hypothesis was accepted. This leads to the conclusion that there is a highly significant agreement between the aonla growing farmers and farm women with regard to their management orientation.

High and medium management orientation of aonla growers is quite logical because all aonla growers tend to introduce high management aspects in horticultural crops especially in aonla.

Conclusions

On the basis of the results emerging out from the present study, it can be concluded that majority of aonla growing farmers and farm women belonged to other backward caste and engaged both in agriculture and dairy. They had no social participation with 1.0-2.5 ha land area and medium farm power. They lived in either big or joint family, 5-10 years of farming experience and medium annual income were other characteristics. These aonla growing farmers and farm women also attainted short duration (one day) off campus training, had high innovation proneness, medium economic motivation, orientation towards competition, managed in medium manner and aonla growing farmers were educated up to middle school level, however, aonla growing farm women were illiterate.

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