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Agriculture Information Management Behaviour of Aonla Growers

Saroj Choudhary*

Department of extension education, SKNCOA, Jobner, India
**Corresponding author*

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A B S T R A C T

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. Aonla growers information management from different sources and channels of agriculture information which have brought the aonla growers and scientists close to understand the suitability of the technologies. 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.

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 agricultural. Today's farmers desire not only the meals for their families from their hard sweat but also surplus production which can 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.

Among the various sources of information mass media is an important one which consists of newspapers, magazines, traditional media, radio, TV and information technology which have proven to be the most powerful opinion makers in this information technology era. They cover more people in less time with minimum cost. This strength of mass media is of great help to extension workers in providing cost effective and efficient services

to the farmers. Computers are the greatest discovery in the recent times. Internet has made the world into a global village and provides the channel for exchange of information quickly. Unfortunately the usage of information technology as a powerful medium in the field of agriculture is yet to take place effectively.

Materials and Methods

Agriculture Information Seeking Behaviour (AISB)

The procedure suggested by Bhople (1995), Jyothi (2000) and followed by Ravindra Kumar (2006) was modified with little modifications as suggested by the experts and followed for measuring the AISB of respondents. Based on the available literature, discussion with extension functionaries all possible farm information sources were exhaustively listed under different heading namely personal contact, group contact and mass media sources. Frequency of contact of different information sources was measured on a three point continuum namely, 'regularly', 'occasionally' and 'never' with a scoring of 2, 1 and 0 respectively.

Agriculture Information Evaluation Behaviour (AIEB)

The first component of AIEB i.e. the act performed for evaluation of information by aonla growers was measured in terms of 13 different acts likely to be performed by the individual for the evaluation of the information and consequent acceptance of farm information. Each act performed by an individual was assigned a numerical score. Frequency of evaluation of different information sources was measured on a four point continuum namely, 'regularly', 'occasionally', 'rarely', and 'never' with a scoring of 3, 2, 1 and 0 respectively

The second component of AIEB i.e. the consideration of different parameters used for evaluation of information by anola growers was measured in terms of 7 different considerations likely to be performed by the individual for the evaluation of the information and consequent acceptance of farm information. Each consideration by an individual was assigned a numerical score. Frequency of evaluation of different information sources was measured on a three-point continuum i.e. 'mostly', 'sometimes' and 'never' with a scoring of 3, 2 and 1 respectively.

The third component of AIEB i.e. the action taken by anola growers before using the information was measured in terms of 4 different actions likely to be performed by the individual for the evaluation of the information and consequent acceptance of farm information.

Each action taken by an individual was assigned a numerical score. Frequency of evaluation of different information sources was measured on a three- point continuum i.e. 'mostly', 'sometimes' and 'never' with a scoring of 3, 2 and 1 respectively.

Agriculture Information Preservation Behaviour (AIPB)

The Information Preservation Behaviour act performed by anola growers was measured in terms of 8 different acts performed or likely to be performed by the individual for the storage of the information and consequent acceptance of farm information. Each act performed by an individual was assigned a numerical score. Frequency of storage of different information sources was measured on a four point continuum namely, 'up to high extent', 'up to medium extent', 'up to low extent', and 'never' with a scoring of 3, 2, 1 and 0 respectively.

Agriculture Information Utilisation Behaviour (AIUB)

The operations carried out by using the information of anola growers was measured in terms of 12 different operations likely to be performed by the individual for the utilization of the information and consequent acceptance of farm information. Each operation by an individual was assigned a numerical score. Frequency of utilisation of different information sources was measured on a four point continuum namely, 'regularly', 'occasionally' and 'never' 'with a scoring of 2, 1 and 0 respectively.

Agriculture Information Dissemination Behaviour (AIDB)

The information dissemination behaviour of anola growers was measured in terms of 8 different acts of disseminating information likely to be performed by the individual for the dissemination of the information. Each acts of disseminating information by an individual was assigned a numerical score. Frequency of dissemination of different information sources was measured on a three point continuum namely, 'regularly', 'occasionally' and 'never' with a scoring of 2, 1 and 0 respectively.

Results and Discussion

The Agriculture Information Management Behaviour in the present study has been conceptualised as a composite measure of information seeking, evaluation, preservation, and utilisation and dissemination behaviour of the individual grower. In view of this conceptualisation, the Information Management Behaviour of the respondents was the sum of all the five dimensions *viz.*, Agriculture Information Seeking Behaviour, Agriculture Information Evaluation Behaviour, Agriculture Information Preservation/ Storage Behaviour, Agriculture Information Utilisation Behaviour and Agriculture Information Dissemination Behaviour.

The Agriculture Information Management Behaviour was measured by the scale developed by Raju (2005) with slight modification as suggested and approved by experts.

The schedule was standardized by expert opinion from the SMS's of Department of Extension Education, Department of Horticulture and Agriculture Officers of Agriculture Department.

The score of Agriculture Information Management Behaviour of a particular farmer was obtained by adding the scores obtained by that particular farmer in all the components of AgricultureInformation Management Behaviour *viz*., Agriculture Information Seeking Behaviour (AISB), Agriculture Information Evaluation Behaviour (AIEB), Agriculture Information Preservation Behaviour (AIPB), Agriculture Information Utilisation Behaviour (AIUB) and Agriculture Information Dissemination Behaviour (AIDB) as perceived by the aonla growers

The data regarding Agriculture Information Management Behaviour of aonla growers has been presented under the following heads:-

Distribution of aonla growers according to their different levels of Agriculture Information Management Behaviour

Information Seeking Behaviour of the aonla growers with respect to their personal contact sources and channels of information.

Information Seeking Behaviour of the aonla growers with respect to their group contact sources and channels of information.

Information Seeking Behaviour of the aonla growers with respect to their mass media sources and channels of information.

Information Evaluation Behaviour of the aonla growers with respect to their acts performed for evaluation of information. Information Evaluation Behaviour of the aonla growers with respect to their consideration of different parameters used for evaluation of information.

Information Evaluation Behaviour of the aonla growers with respect to their action taken by anola growers before using the information.

Information Preservation Behaviour of the aonla growers.

Information Utilization Behaviour of the aonla growers.

Information Dissemination Behaviour of the aonla growers.

Distribution of aonla growers according to their different levels of Agriculture Information Management Behaviour

The Agriculture Information Management Behaviour of aonla growing farmers and farm women was calculated by summing the scores obtained by that particular farmer in all the five components of AIMB which AISB, AIEB, AIPB, AIUB and AIDB. Then the aonla growing farmers and farm women were categorized into five different levels of AIMB namely, very low (0-20 per cent), low (20-40 per cent), medium (40-60 per cent), high (60-80 per cent) and very high (80-100 per cent). Further the X^2 value between the frequencies of aonla growing farmers and farm women in different levels was calculated to find out the significance the agreement between the aonla growing farmers and farm women.

The data presented in Table 1 indicated that majority of aonla growing farmers and farm women (55.83 per cent and 57.50 per cent respectively) were having medium level of AIMB, whereas 6.67 per cent, 35.00 per cent and 2.50 per cent aonla growing farmers and 10.00 per cent, 31.67 per cent, and 0.83 per cent aonla growing farm women were having low, high and very high level of AIMB respectively and none of the aonla growing farmers and farm women were having very low level of AIMB.

The calculated value of Chi-square (χ^2) test was found to be 184.708, which is more than its tabulated value (9.488) at 5 per cent 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 of the aonla growers with regard to their AIMB.

Agriculture Information Seeking Behaviour of the aonla growers in Jaipur and Ajmer districts with respect to their personal contact sources and channels of information

The data related with Agriculture Information Seeking Behaviour of the aonla growing farmers and farm women with respect to their sources of personal contact is incorporated in Table 1.1 shows that calculated Wilcoxen 'Z' value for the personal contact sources viz. 'personal contact with AO/ AAO', 'personal Contact with AHO/ HA', 'personal letter', 'office call', 'telephone call', 'contact with progressive farmers', 'contact with Agro Service Centers', 'friends and neighbours', 'farm and home visit', 'farmers call and farm clinic' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the

conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these personal contact sources and channels of information. Whereas the calculated Wilcoxen 'Z' value for the personal contact sources viz. 'university/ KVK scientist' and 'private extension officer' were less than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these personal contact sources and channels of information.

The data presented in Table 1.1 indicates that for aonla growing farmers and farm women "contact with progressive farmers" (MPS 80.65 and 76.25 respectively) and "friends and neighbours" (MPS 77.85 and 74.05 respectively) were the major personal contact sources of agriculture information used by majority of the anola growers and accorded first and second ranks respectively. It also revealed that for aonla growing farmers "farm clinic" (MPS 60.95) and farm women "farmers cell" (MPS 61.45) were the least preferred information source as perceived by the respondents.

Agriculture Information Seeking Behaviour of the aonla growers in Jaipur and Ajmer districts with respect to their sources of group contact

The data related with Agriculture Information Seeking Behaviour of the aonla growing farmers and farm women with respect to their sources of group contact incorporated in Table 1.2 shows that calculated Wilcoxen 'Z' value for the group contact sources viz. 'group discussion and meeting', 'training programmes', 'discussion with fellow farmers', 'field day and field trip' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these group contact sources and channels of information. Whereas the calculated Wilcoxen 'Z' value for the group contact sources 'study tour' was less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these group contact source and channel of information.

The data presented in Table 1.2 indicates that for aonla growing farmers "group discussion and meeting" (MPS 71.25) and for farm women "discussion with follow farmers" (MPS 61.13) were the major group contact sources of agriculture information used by majority of the anola growers and accorded first rank, whereas for aonla growing farmers "discussion with follow farmers" (MPS 70.57) and for farm women "group discussion and meeting" (MPS 56.25) were the major group contact sources of agriculture information used by majority of the anola growers and accorded second rank respectively.

It also revealed that for aonla growing farmers and farm women "study tour" (MPS 59.90 and 50.40) was the least preferred information sources.

Agriculture Information Seeking Behaviour of the aonla growers in Jaipur and Ajmer districts with respect to their sources of mass media

The data related with Agriculture Information Seeking Behaviour of the aonla growers of farmers and farm women with respect to their sources of mass media were incorporated in Table 1.3 shows that calculated Wilcoxen 'Z' value for the mass media sources viz. 'television', 'newspaper', 'agricultural magazine', 'krishi mela / exhibition', 'internet', 'mobile phone' and 'agriculture journal, magazine' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these mass media sources and channels of information.

Whereas the calculated Wilcoxen 'Z' value for the mass media sources viz. 'radio' and 'farm publication' were less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Seeking Behaviour regarding these mass media source and channel of information.

The data presented in Table 1.3 indicates that for aonla growing farmers and farm women "Television" (MPS 70.97 and 60.71 respectively) was the major mass media source of agriculture information used by majority of the anola growers and accorded first rank, whereas for the aonla growing farmers "Radio" (MPS 68.94) and for farm women "Krishi Mela/Exhibition (MPS 58.35) were the major mass media sources of agriculture information used by majority of the anola growers and accorded second rank respectively. It also revealed that for aonla growing farmers and farm women "Agriculture journal, magazine" (MPS 58.25 and 48.38 respectively) was the least preferred information sources.

Agriculture Information evaluation behaviour of the aonla growers with respect to their acts performed for evaluation of information

The data related with Agriculture Information Evaluation Behaviour of the aonla growing farmers and farm women with respect to their acts performed for evaluation of information incorporated in Table 2.1 shows that calculated Wilcoxen 'Z' value for the acts performed for evaluation of information were incorporated in Table 5.2.1.3 shows that calculated Wilcoxen 'Z' value for the acts performed for evaluation of information viz. 'discussion with family members', 'discussion with neighbours and friends', 'discussion with progressive farmers', 'discussion with the staff of the horticulture dept. AHO/AS', 'discussion with the extension personnel of the Department of agriculture AO/AAO', 'discussion with the scientists of the university / KVK', 'in the light of past experience', 'discussion with private extension personal', 'discussion with the scientist' and 'considering with small scale trials' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation

Behaviour regarding these acts performed for evaluation of information. Whereas the calculated Wilcoxen 'Z' value for the acts performed for evaluation of information viz. 'considering its economic feasibility', 'judge it in relation to climatic condition' and 'accepted as such' were less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation Behaviour regarding these acts performed for evaluation of information.

The data presented in Table 5.2.2.1 indicates that for aonla growing farmers "Discussion with the staff of the horticulture department AHO/AS" (MPS 75.61) and for farm women "Discussion with neighbours and friends" (MPS 74.40) were the major act performed for evaluation of agriculture information used by majority of the anola growers and accorded first rank, whereas, for the aonla growing farmers "Discussion with progressive farmers" (MPS 75.00) and for farm women "Discussion with family members" (MPS 72.95) were the major acts performed for evaluation of agriculture information used by majority of the anola growers and accorded second rank respectively. It also revealed that for aonla growing farmers and farm women "accepted as such" (MPS 54.37 and 53.96 respectively) was the least preferred information source as perceived by the respondents.

It was observed that mass media sources such as radio, television, agril magazines and newspapers were consulted only when the farmers know that these sources covers needful information. Whereas majority of the respondents regularly use the Krishi mela, as a sources of information. Which is nearer to the study area and most of the farmers get the seeds and required information during Krishi mela, so farmers regularly participate in Krishi mela.

None of the respondents used the internet sources due to lack of knowledge, non-availability of services in remote area and difficulty in accessing the internet.

Agriculture Information Evaluation Behaviour of the aonla growers with respect to their consideration of different parameters used for evaluation of information

The data related with Agriculture Information Evaluation Behaviour of the aonla growing farmers and farm women with respect to their consideration of different parameters used for evaluation of information incorporated in Table 2.2 shows that calculated Wilcoxen 'Z' value for the consideration of different parameters used for evaluation of information viz. 'profitability from innovations', 'method of doing planting', 'availability of inputs', 'predictability' and 'triability' were more than the tabulated value at 5 per cent level of significance

Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation Behaviour regarding these considerations of different parameters used for evaluation of information. Whereas the calculated Wilcoxen 'Z' value for the consideration of different parameters used for evaluation of information viz. 'observability' and 'complexity' were less than the tabulated value at 5 per cent level of significance.

Table.1 Distribution of aonla growing farmers and farm women according to their levels of Agriculture Information Management Behaviour

N=240

S. No.	Levels of Information Management Behaviour	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 per cent)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Low (20-40 per cent)	4 (5.00)	7 (8.75)	4 (10.00)	5 (12.50)	8 (6.67)	12 (10.00)
3.	Medium (40-60 per cent)	48 (60.00)	47 (58.75)	19 (47.50)	22 (55.00)	67 (55.83)	69 (57.50)
4	High (60-80 per cent)	26 (32.50)	25 (31.25)	16 (40.00)	13 (32.50)	42 (35.00)	38 (31.67)
5	Very high (80-100 per cent)	2 (2.50)	1 (1.25)	1 (2.50)	0 (0.00)	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 = 184.708 d.f. = 4 Figures in parentheses indicate percentage

Table.2 Agriculture information seeking behaviour of the aonla growers with respect to their sources of personal contact

N=240

S. No.	Personal contact sources	Jaipur district (n=160)				Ajmer district (n= 80)				Total respondents (N = 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n= 80)		Farmers (n=40)		Farm women (n= 40)		Farmers (n=120)		Farm women (n= 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Personal contact with AO/ AAO	66.30	VIII	63.80	IX	71.30	VII	67.50	IX	68.80	VII	65.65	VIII	2.15*
2.	Personal Contact with AHO/ HA	67.50	VI	65.00	VIII	68.75	VIII	68.75	VIII	68.13	VIII	66.88	VII	2.53*
3.	Personal letter	60.60	XIII	68.10	V	61.30	XII	57.50	XIII	60.95	XII	62.80	XI	3.29*
4	Office call	66.90	VII	59.40	XIII	73.80	VI	65.00	X	70.35	VI	62.20	XII	3.17*
5	Telephone call	68.80	V	67.50	VI	76.30	V	70.00	VI	72.55	V	68.75	VI	3.66*
6	Contact with progressive farmers	77.50	I	72.50	I	83.80	I	80.00	I	80.65	I	76.25	I	2.01*
7	Contact with Agro Service Centers	70.60	IV	66.90	VII	78.00	IV	74.00	IV	74.30	IV	70.45	IV	3.03*
8	Friends and neighbours	74.40	II	70.60	II	81.30	II	77.50	II	77.85	II	74.05	II	2.94 *
9	University/ KVK scientist	72.50	III	69.40	III	80.00	III	76.30	III	76.25	III	72.85	III	1.36 NS
10	Private extension officer	65.00	IX	68.80	IV	67.50	IX	71.30	V	66.25	IX	70.05	V	1.40 NS
11	Farm and home visit	63.10	XI	62.50	X	63.80	XI	63.80	XI	63.45	XI	63.15	X	2.80*
12	Farmers cell	63.80	X	61.90	XI	66.00	X	61.00	XII	64.90	X	61.45	XIII	3.04*
13	Farm clinic	61.90	XII	61.30	XII	60.00	XIII	68.80	VII	60.95	XII	65.05	IX	2.20*
	Overall	**67.61**		**65.98**		**71.68**		**69.34**		**69.64**		**67.66**		**2.58***

NS = Non-significant * = significant at 5 per cent level of significance

Table.3 Agriculture information seeking behaviour of the aonla growers with respect to their sources of group

N=240

S. No.	Group contact sources	Jaipur district (n=160)				Ajmer district (n= 80)				Total respondents (n = 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n= 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Group Discussion and meeting	67.50	II	45.00	II	75.00	I	67.50	II	71.25	I	56.25	II	2.91*
2.	Training programmes	65.63	III	43.75	IV	71.30	III	66.30	III	68.47	III	55.03	III	2.56*
3.	Discussion with fellow farmers	68.13	I	46.25	I	73.00	II	76.00	I	70.57	II	61.13	I	2.73*
4.	Field day	62.50	IV	44.17	III	65.00	V	65.00	IV	63.75	V	54.59	IV	2.18*
5.	Field trip	60.00	V	42.50	V	69.00	IV	63.00	V	64.50	IV	52.75	V	2.19*
6.	Study tour	58.80	VI	40.80	VI	61.00	VI	60.00	VI	59.90	VI	50.40	VI	1.4 NS
	Overall	**63.76**		**43.75**		**69.05**		**66.30**		**66.41**		**55.02**		**2.33**

NS = Non-significant * = significant at 5 per cent level of significance

Table.4 Agriculture information seeking behaviour of the aonla growers with respect to their sources of mass media

N=240

S. No.	Mass contact sources	Jaipur district (n=160)				Ajmer district (n= 80)				Total respondents (N = 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n = 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Radio	66.88	III	43.75	III	71.00	II	68.00	III	68.94	II	55.88	III	1.25 NS
2.	Television	68.13	I	45.42	I	73.80	I	76.00	I	70.97	I	60.71	I	2.12*
3.	News paper	67.50	II	42.90	IV	68.80	III	63.80	V	68.15	III	53.35	V	2.73*
4	Agricultural magazine	61.90	VII	39.60	VIII	64.00	VI	59.00	VII	62.95	VI	49.30	VII	2.83*
5	Krishi mela / Exhibition	63.80	IV	44.20	II	66.30	IV	72.50	II	65.05	IV	58.35	II	2.72*
6	Internet	63.75	V	42.50	V	56.00	IX	54.00	IX	59.88	VIII	49.25	VIII	2.80*
7	Mobile phone	62.50	VI	41.67	VI	65.00	V	66.00	IV	63.75	V	53.84	IV	1.97*
8	Farm publication	59.40	VIII	40.40	VII	61.00	VII	61.00	VI	60.20	VII	50.70	VI	1.76 NS
9	Agriculture Journal, magazine	57.50	IX	38.75	IX	59.00	VIII	58.00	VIII	58.25	IX	48.38	IX	2.50*
	Overall	**63.48**		**42.13**		**64.99**		**64.26**		**64.24**		**53.31**		**2.30***

NS = Non-significant * = significant at 5 per cent level of significanc

Table.5 Agriculture information evaluation behaviour of the aonla growers with respect to their act performed for evaluation of agriculture information

N=240

S. No.	Act performed for evaluation of agriculture information	Jaipur district (n=160)				Ajmer district (n = 80)				Total respondents (n= 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n = 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Discussion with family members	73.30	IV	69.60	III	69.20	IV	76.30	I	71.25	IV	72.95	II	3.04*
2.	Discussion with neighbours and friends	74.20	III	73.80	I	70.80	III	75.00	II	72.50	III	74.40	I	2.36*
3.	Discussion with progressive farmers	77.50	I	71.70	II	72.50	II	73.80	III	75.00	II	72.75	III	3.03*
4	Discussion with the staff of the horticulture dept. AHO/AS	75.42	II	67.50	V	75.80	I	68.80	V	75.61	I	68.15	V	2.84*
5	Discussion with the extension personnel of the Department of Agriculture AO/AAO	72.10	V	68.80	IV	65.80	V	70.00	IV	68.95	V	69.40	IV	2.11*
6	Discussion with the scientists of the university / KVK	71.70	VI	61.30	IX	62.50	VI	65.00	VI	67.10	VI	63.15	VIII	2.45*
7	In the light of past experience	68.30	VIII	64.60	VI	59.17	VIII	62.50	VIII	63.74	VIII	63.55	VII	3.64*
8	Considering its economic feasibility	67.50	IX	63.33	VII	56.70	IX	63.80	VII	62.10	IX	63.57	VI	1.02 NS
9	Discussion with private extension personal	70.80	VII	62.90	VIII	60.80	VII	57.50	X	65.80	VII	60.20	IX	2.40*
10	Judge it in relation to climatic condition	60.80	XII	57.10	XII	52.50	XII	60.00	IX	56.65	XII	58.55	X	1.29NS
11	Discussion with the scientist	65.80	X	59.20	XI	55.00	X	55.00	XI	60.40	X	57.10	XI	3.27*
12	Considering with small scale trials	63.30	XI	60.42	X	53.30	XI	52.50	XII	58.30	XI	56.46	XII	2.55*
13	Accepted as such	57.91	XIII	56.66	XIII	50.83	XIII	51.25	XIII	54.37	XIII	53.96	XIII	1.82NS
	Overall	**69.13**		**64.38**		**61.92**		**63.96**		**65.52**		**64.17**		**2.45***

NS = Non-significant * = significant at 5 per cent level of significance

Table.6 Agriculture information evaluation behaviour consideration of different parameters used for evaluation of information

N=240

S. No.	parameters for evaluation of information	Jaipur district (n=160)				Ajmer district (n = 80)				Total respondents (n= 240)				Wilcoxn (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n = 120)		Farm women (n=120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	Rank	Rank	
1.	Profitability from innovations	79.60	I	78.80	I	77.55	II	72.50	III	78.55	2	75.65	II	2.91*
2.	Method of doing planting	78.30	II	77.50	II	79.17	I	77.50	I	78.74	I	77.50	I	2.46*
3.	Availability of inputs	73.80	III	72.50	III	76.70	III	75.00	II	75.25	III	73.75	III	2.78*
4	Observability/	72.10	V	67.50	VII	72.50	IV	70.80	IV	72.30	IV	69.15	IV	1.62NS
5	Predictability	69.68	VI	69.58	IV	70.80	V	65.80	VI	70.24	V	67.69	VI	2.78*
6	Triability	69.17	VI	68.33	V	69.20	VI	67.50	V	69.19	VI	67.92	V	2.40*
7	Complxity	68.33	VII	67.68	VI	65.83	VII	63.33	VII	67.08	VII	65.51	VII	0.98NS
	Overall	**73.00**		**71.70**		**73.10**		**70.35**		**73.05**		**71.02**		**2.28***

NS = Non-significant
* = significant at 5 per cent level of significance

Table.7 Agriculture information evaluation behaviour action taken by anola growers befor using the agriculture information

N=240

S. No.	Action taken	Jaipur district (n=160)				Ajmer district (n = 80)				Total respondents (N = 240)				Wilcoxn (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n= 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Considering its profitability	72.50	I	72.08	II	75.80	I	64.50	III	74.15	I	68.44	III	2.91*
2.	Discussing with progressive farmers	72.08	II	73.33	I	72.50	II	70.80	I	72.29	II	72.07	I	2.9*
3.	Observation of demonstration by fellow farmers	69.60	III	69.60	III	70.80	III	68.30	II	70.20	III	68.95	II	2.47*
4	Conducting trial on own farm	67.90	IV	68.80	IV	68.30	IV	64.20	IV	68.10	IV	66.35	IV	1.78 NS
	Overall	**70.52**		**70.95**		**71.85**		**66.95**		**71.19**		**68.95**		**2.52***

NS = Non-significant * = significant at 5 per cent level of significance

Table.8 Agriculture information preservation behaviour of the aonla growers with respect to different methods for information retention

N=240

S. No.	Methods for information retention	Jaipur district (n=160)				Ajmer district (n= 80)				Total respondents (N= 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n= 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Memorizing	72.90	IV	67.50	III	68.30	VI	74.20	III	70.60	V	70.85	III	2.51*
2.	Taking down in a note book/diary	40.80	VIII	62.92	VIII	64.17	VIII	64.17	VIII	52.49	VIII	63.55	VIII	3.44*
3.	Preserve the printed literature like leaflets, bulletins, booklets at a safe place	75.00	II	66.70	IV	80.80	I	72.50	IV	77.90	I	69.60	IV	2.56*
4	Preserve the news paper cutting	70.00	V	65.00	V	79.20	II	69.20	V	74.60	III	67.10	V	2.03*
5	Preserve the information in CD/floppy / soft copy	75.80	I	64.00	VI	77.50	III	67.50	VI	76.65	II	65.75	VI	2.58*
6	Telling family members to remember	73.30	III	78.80	I	72.50	IV	78.30	I	72.90	IV	78.55	I	2.13*
7	By maintaining a special file	67.08	VII	63.33	VII	66.67	VII	65.83	VII	66.88	VII	64.58	VII	1.29NS
8	By practicing in daily life	68.30	VI	77.10	II	70.00	V	75.80	II	69.15	VI	76.45	II	1.17NS
	Overall	**67.90**		**68.17**		**72.39**		**70.94**		**70.15**		**69.55**		**2.21***

NS = Non-significant

* = significant at 5 per cent level of significance

Table.9 Agriculture Information utilization behaviour of the aonla growers with respect to different operations carried out for using the agriculture information

N=240

S. No.	Operations carried out for using the information	Jaipur district (n=160)				Ajmer district (n = 80)				Total respondents (N = 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n = 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Pit preparation	83.80	III	78.30	IV	72.50	IV	70.00	III	78.15	III	74.15	IV	2.83*
2.	Selection of seed material	85.80	II	80.40	II	75.00	II	77.50	I	80.40	II	78.95	I	3.35*
3.	Varieties	88.30	I	81.30	I	78.23	I	74.10	II	83.27	I	77.70	II	3.46*
4	Propagation	82.50	IV	79.20	III	69.20	VI	69.20	IV	75.85	VI	74.20	III	2.93*
5	Plantation	82.10	V	77.50	V	70.80	V	67.50	V	76.45	IV	72.50	V	3.30*
6	Hoeing and weeding	79.20	VII	76.70	VI	65.83	VIII	63.33	VII	72.52	VIII	70.02	VII	2.85*
7	Irrigation	80.00	VI	75.80	VII	68.33	VII	66.67	VI	74.17	VII	71.24	VI	3.34*
8	Intercropping	75.40	IX	73.30	IX	60.00	X	61.70	VIII	67.70	X	67.50	VIII	1.82NS
9	Manure and fertilizer management	78.30	VIII	74.20	VIII	74.20	III	60.00	IX	76.25	V	67.10	IX	1.55NS
10	Training/ pruning	70.40	XI	71.30	X	58.30	XI	59.20	X	64.35	XI	65.25	X	2.78*
11	Harvesting and Grading	74.17	X	70.42	XI	62.50	IX	58.33	XI	68.34	IX	64.38	XI	2.02*
12	Marketing operations	70.80	XII	68.30	XII	55.10	XII	55.00	XII	62.95	XII	61.65	XII	2.44*
	Overall	**79.02**		**75.77**		**67.49**		**65.24**		**73.26**		**70.50**		**2.72***

NS = Non-significant * = significant at 5 per cent level of significance

Table.10 Information dissemination behaviour of the aonla growers with respect to their disseminating agriculture information

N=240

S. No.	Disseminating	Jaipur district (n=160)				Ajmer district (n = 80)				Total respondents (N = 240)				Wilcoxon (Z value)
		Farmers (n=80)		Farm women (n = 80)		Farmers (n=40)		Farm women (n = 40)		Farmers (n=120)		Farm women (n = 120)		
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank	
1.	Discussion with neighbouring farmer	69.40	II	68.80	II	67.50	I	68.80	II	68.45	I	68.80	II	2.79*
2.	Discussion with progressive farmers	70.00	I	69.38	I	65.00	III	70.00	I	67.50	II	69.69	I	2.54*
3.	Participating in demonstrations and field trials	68.80	III	63.80	VI	60.00	V	67.50	III	64.40	IV	65.65	III	2.79*
4	Participating in farmers training programmes	65.00	V	67.50	III	63.80	IV	63.80	IV	64.40	IV	65.65	III	2.42*
5	Participating in Krishi mela	63.80	VI	66.30	IV	67.50	I	62.50	V	65.65	III	64.40	V	2.03*
6	Participating in TV and radio programmes	66.88	IV	61.25	VII	53.75	VII	58.75	VII	60.32	VI	60.00	VII	2.26*
7	Writing in news papers	63.75	VII	60.63	VIII	51.25	VIII	56.25	VIII	57.50	VIII	58.44	VIII	2.41*
8	Discussion with relatives	62.50	VIII	65.62	V	56.25	VI	60.00	VI	59.38	VII	62.81	VI	1.66NS
	Overall	**66.27**		**65.41**		**60.63**		**63.45**		**63.45**		**64.43**		**2.36***

NS = Non-significant * = significant at 5 per cent level of significance

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation Behaviour regarding these considerations of different parameters used for evaluation of information.

The data presented in Table 2.2 indicates that for aonla growing farmers and farm women "method of doing planting" (MPS 78.74and 77.50 respectively) and "profitability of innovations" (MPS 78.55 and 75.65 respectively) were the major consideration of different parameters used for evaluation of agriculture information used by majority of the anola growers and accorded first and second ranks respectively. It also revealed that aonla growing farmers and farm women "complxity" (MPS 67.08 and 65.51 respectively) was the least preferred information source as perceived by the respondents.

Agriculture Information Evaluation Behaviour of the aonla growers with respect to their action taken by anola growers before using the information

The data related Agriculture Information Evaluation Behaviour of the aonla growing farmers and farm women with respect to their action taken by anola growers before using the information incorporated in Table 2.3 shows that calculated Wilcoxen 'Z' value for the action taken by anola growers before using the information viz. 'considering its profitability', 'discussing with progressive

farmers' and 'observation of demonstration by fellow farmers'were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation Behaviour regarding these actions taken by anola growers before using the information. Whereas the calculated Wilcoxen 'Z' value for the 'conducting trial on own farm' was less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to their Agriculture Information Evaluation Behaviour regarding this action taken by anola growers before using the information.

The data presented in Table 2.3 indicates that for aonla growing farmers "considering its profitability" (MPS 74.15) and for farm women "discussing with progressive farmers" (MPS 72.07) were the major action taken by anola growers before using the agriculture information used by majority of the anola growers and accorded first rank, whereas, for aonla growing farmers "discussing with progressive farmers" (MPS 72.29) and for farm women "observation of demonstration by follow farmers" (MPS 68.95) were the major action taken by anola growers before using the agriculture information used by majority of the anola growers and accorded second rank respectively. It also revealed that for anola growing farmers and farm women "conducting trail on own farm" (MPS 68.10 and 66.65 respectively) was the least preferred information source as perceived by the respondents.

It was observed that methods like discussion with staff of horticulture and agriculture department and discussion with scientists of the university were relatively employed by the less number of respondents. This may be due to the fact that they donot visit the farmers field regularly and farmers do not consult them for getting information.

Agriculture Information Preservation Behaviour of the aonla growers

The data related with Agriculture Information Preservation Behaviour of the aonla growing farmers and farm women with respect to their method of information retention were incorporated in Table 3 shows that calculated Wilcoxen 'Z' value for the method of information retention viz. 'memorizing', 'taking down in a note book/diary', 'preserve the printed literature like leaflets', bulletins, booklets at a safe place', 'preserve the newspaper cutting', 'preserve the information in CD/floppy / soft copy' and 'telling family members to remember' were more than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to these methods of information retention. Whereas the calculated Wilcoxen 'Z' value for the method of information retention viz. by maintaining a special file and by practicing in daily life were less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to these methods of information retention.

The data presented in Table 3 indicates that for aonla growing farmers "Preserve the printed literature like leaflets, bulletins, booklets at a safe place" (MPS 77.90) and for farm women "Telling family members to remember" (MPS 78.85) were the major preservation/storage behaviour of agriculture information used by majority of the anola growers and accorded first rank, whereas, for aonla growing farmers "Preserve the information in CD/floppy / soft copy" (MPS 76.65) and for farm women "By practicing in daily life" (MPS 76.45) were the major preservation/storage behaviour of agriculture information used by majority of the anola growers and accorded second rank respectively.

It also revealed that for anola growing farmers and farm women "Taking down in a note book/diary" (MPS 63.55 and 52.49 respectively) was the least preferred information source as perceived by the respondents.

Only few of the respondents preserve the information in note book/diary may be due to availability of needed information in note book/diary is limited and not easily available and lack of awareness about these methods. This may be available only during Krishi mela but very limited information with respect to aonla crops and also lack of facilities to retrieve the stored information.

Agriculture Information Utilization Behaviour of the aonla grower

The data related with Agriculture Information Utilization Behaviour of the aonla growing farmers and farm women with respect to their operations carried out for using the information incorporated in Table 4 shows that calculated Wilcoxen 'Z' value for the operations carried out by for using the information viz. 'pit preparation', 'selection of seed material', 'varieties', 'propagation', 'plantation', 'hoeing and weeding', 'irrigation, 'training / pruning', 'harvesting and grading', and 'marketing operations' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to these operations carried out for using the information. Whereas the calculated Wilcoxen 'Z' value for the operations carried out for using the information viz. 'intercropping' and 'manure and fertilizer management' were less than the tabulated value at 5 per cent level of significance.

Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to these operations carried out for using the information.

The data presented in Table 4 indicates that for aonla growing farmers "varieties" (MPS 83.27) and for farm women "selection of seed material" (MPS 78.95) were the major utilization behaviour of agriculture information used by majority of the anola growers and accorded first rank. Whereas, for aonla growing farmers "Selection of seed material" (MPS 80.40) and for farm women "varieties" (MPS 77.70) were the major utilization behaviour of agriculture information used by majority of the anola growers and accorded second rank respectively. It also revealed that for anola growing farmers and farm women "Marketing operations" (MPS 62.95 and 61.65 respectively) was the least preferred information source as perceived by the respondents.

Agriculture Information Dissemination Behaviour of the aonla growers

The data related with Agriculture Information Dissemination Behaviour of the aonla growing farmers and farm women with respect to their acts of disseminating information incorporated in Table 5.2.5 shows that calculated Wilcoxen 'Z' value for the acts of disseminating information viz. 'discussion with neighbouring farmer', 'discussion with progressive farmers', 'participating in demonstrations and field trials', 'participating in farmers training programmes', 'participating in Krishi mela', 'participating in TV and radio programmes' and 'writing in news papers' were more than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was rejected and alternate hypothesis was accepted, which leads to the conclusion that there is a significant difference between aonla growing farmers and farm women with respect to these acts of disseminating information. Whereas the calculated Wilcoxen 'Z' value for the acts of disseminating information viz. 'discussion with relatives' was less than the tabulated value at 5 per cent level of significance. Hence, the null hypothesis was accepted and alternate hypothesis was rejected, which leads to the conclusion that there is no significant difference between aonla growing farmers and farm women with respect to these acts of disseminating information.

The data presented in Table 5 indicates that for aonla growing farmers "Discussion with neighbouring farmer" (MPS 68.45) and for farm women "Discussion with progressive farmers" (MPS 69.69) were the major dissemination behaviour of agriculture information used by majority of the anola growers and accorded first rank, whereas, for aonla growing farmers "Discussion with progressive farmers" (MPS 67.50) and for farm women "Discussion with neighbouring farmer" (MPS 68.80) were the major dissemination behaviour of agriculture information used by majority of the anola growers and accorded second rank respectively. It also revealed that for anola growing farmers and farm women "Writing in newspapers" (MPS 58.00 and 55.94 respectively) was the least preferred information source as perceived by the respondents.

Results also indicated that method of planting was found to be the major consideration among different parameters used for evaluation of agriculture information by both the aonla growing farmers and farm women.

As the action taken by anola growers before using the agriculture information is concerned it was found that the aonla growing farmers focused on "considering its profitability" whereas, farm women mainly stressed on "discussing with progressive farmers" before using the agriculture information.

Regarding preservation behaviour of agriculture information it was found that the aonla growing farmers used to "Preserve the printed literature like leaflets, bulletins, booklets at a safe place", whereas the farm women were used to preserve the agriculture information by "Telling family members to remember".

Regarding utilization behaviour of agriculture information is concerned it was found that the aonla growing farmers used "varieties". However, the farm women used "selection of seed material" regarding the major information utilization behaviour of agriculture information.

Regarding the major information dissemination behaviour of agriculture information, it was found that the aonla growing farmers used "Discussion with

neighbouring farmers" and farm women used "Discussion with progressive farmers".

Recommendations

The study clearly revealed that the agriculture information management behaviour was greatly varied among the respondents of all the aonla growing farmers and farm women. Agriculture Information Seeking Behaviour, Agriculture Information Evaluation Behaviour, Agriculture Information Preservation/Storage Behaviour, Agriculture Information Utilisation Behaviour and Agriculture Information Dissemination Behaviour and the extent of use and degree of credibility of different sources and channels of agriculture information were not similar of all the categories of aonla growers.

So it is not appropriate to apply similar extension and communication strategy for transferring new technologies for different categories of aonla growers.

The technology demand of different category of aonla growers vary greatly, it is suggested that while transferring the technology, resources and socio-economic conditions of aonla growers should be considered.

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