

## RESEARCH ARTICLE

**Attitude of Registered Farmers and Traders Toward e-NAM****Rohtash Kumar<sup>1</sup>, Arvind Kumar Jhajharia<sup>2</sup>,  
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[shubham21334@gmail.com](mailto:shubham21334@gmail.com)**ABSTRACT**

Present study is based on attitude of the registered farmers and traders towards e-NAM in Sriganganagar district of Rajasthan. Sriganganagar and Padampur mandis were selected for the study. Top 5 villages from both mandis was selected on the basis of maximum number of farmers registered in mandi. Hence total of 10 villages were selected for the selection of sample farmers from both mandis. 10 farmers was selected from each village and therefore, total of 100 farmers was selected from both mandis. The list of 25 traders from each mandi was selected on the basis of simple random sampling method and therefore total 50 traders was selected for the study purpose. To find out the most favorable attitude which influence in adoption of e-NAM, Likert scale technique was used. The result reveals that maximum (71%) farmers had favorable attitude, followed by unfavorable attitude (16%), (13%) of respondents had highly favorable attitude respectively towards the e-NAM and same maximum (64%) traders had favorable attitude, followed by highly favorable attitude (22%), (14%) of respondents had unfavorable attitude respectively towards the e-NAM.

**Key words:** e-NAM, Attitude, Likert Scale, Mandi, Traders and Farmers.

Agricultural markets in the country have been subjected to various reform processes with an aim of enhancing market accessibility, transparency in market procedures and provision of remunerative prices to the farmers (*Raju et. al. 2022 & Bandhavya et. al. 2022*). ICT driven extension services are expected to have a crucial role in facilitating the information and knowledge sharing among various actors of the knowledge generation, knowledge dissemination, input supply and knowledge consumption systems holistically (*Pradhan et. al. 2018 & Jha et. al. 2021*). The Electronic National Agricultural Market (e-NAM) system was introduced in July 2015 and was made operational by appointing the Small Farmers' Agribusiness Consortium (SFAC) as the leading implementing agency to operate and maintain the e-NAM platform. SFAC is a registered society of Department of Agriculture, Cooperation & Farmers' Welfare (DAC&FW) under MoA & FW. SFAC is involved in development, operation and maintenance of the e-NAM platform with technical support from the Strategic Partner viz. M/s Nagarjuna Fertilizer and

Chemicals Limited, initially, for three years from 2015-16 to 2017-18. The e-NAM system was first launched in India in 14 April 2016 with an initial coverage of 21 mandis across 8 states and allowing trading in 24 commodities on pilot basis (Press Information Bureau, 2016). Since then, the number of mandis integrated with e-NAM has increased to 470 by October 2017 and at present 479 mandis across fourteen states and in one union territory are covered by 21 February 2018 (The Economic Times, 2018) with a target of linking 585 mandis by March 2018. The Cabinet Committee on Economic Affairs approved a Central Sector Scheme for Promotion of e-NAM through Agri-Tech Infrastructure Fund (ATIF). The government has allocated Rs. 200 crore to the ATIF.

e-NAM is being deployed in selected 585 regulated wholesale markets in States/UTs desirous of joining the e-platform. Small Farmers' Agribusiness Consortium (SFAC) is operating the e-NAM as the implementing agency with technical support from the Strategic Partner (SP). As e-NAM is beneficial for the farmers as well traders, but there are several

constraints in adoption of this technology. Present study encounters these constraints in study area.

## METHODOLOGY

The study was conducted in Sriganganagar district of Rajasthan. Sriganganagar district has been selected on the basis of maximum number of registered farmers under the e-NAM portal. Sriganganagar and Padampur mandis were selected for the study. Top 5 villages from both mandis was selected on the basis of maximum number of farmers registered in mandi. Hence total of 10 villages were selected for the selection of sample farmers from both mandis. 10 farmers was selected from each village and therefore, total of 100 farmers and the list of 25 traders from each mandi was selected on the basis of simple random sampling method and therefore, total 50 traders was selected for the study purpose. Primary data was collected from farmers. Secondary data was collected from different source available to exposure, To find out the most favorable attitude and association which influence in adoption of e-NAM, likert scale and correlation technique was used.

## RESULTS AND DISCUSSION

*The attitude of registered farmers and traders toward e-NAM in Sriganganagar district* : The result seen in Table 1 indicates that majority (71.00%) of the e-NAM registered farmers had favorable attitude towards e-NAM, while 16.00 per cent of them were with unfavorable attitude, and 13.00 per cent with highly favorable attitude.

The result seen in Table 1 also indicates that majority (64.00%) of the e-NAM registered traders had favorable attitude towards e-NAM, while 22.00 per cent of them were with highly favorable attitude, and 22.00 per cent with unfavorable attitude. The

**Table 1. The attitude of registered farmers and traders toward e-NAM (N=100)**

Category	No.	%
<i>Farmers toward e-NAM (N=100)</i>		
Unfavorable attitude (<45.84)	16	16
Favorable attitude (45.84-58.64)	71	71
Highly favorable attitude(>58.64)	13	13
Mean= 52.24; SD= 6.405679298		
<i>Traders toward e-NAM (N=50)</i>		
Unfavorable attitude(<38.51)	7	14
Favorable attitude (38.51-48.17)	32	64
Highly favorable attitude (>48.17)	11	22
Mean = 43.34; SD= 4.83		

results are complimentary with *Vinaya et al. (2013)*, *Prajapati (2017)*, *Katole (2017)* and *Haseena (2017)*.

The result seen in Table 2 indicates that the statements “e-NAM process is more easy than open auction process” have first rank with mean per cent score 97.02, “I believe that product selling through e-NAM is helping farmer in getting rational return” second rank with 96.00 MPS, e-NAM scheme is more beneficial for farmers than open auction bidding had third rank with 94.00 MPS and last fourteen rank statement “e-NAM process is lengthier than open auction system” had minimum MPS 44.00.

The result seen in Table 2., indicates that the statements “e-NAM process is lengthier than open auction system” have first rank with mean per cent score 75.02, “e-NAM process is difficult for illiterate people” second rank with 73.60 MPS, “Agricultural product weighing through e-NAM takes more time than open auction bidding” had third rank with 73.20 MPS and last fourteen rank statement “Less number of bidder taking part in e-NAM” had minimum MPS 36.40.

Table 3 ascertain the relationship between profile of the farmers and their attitude towards e-NAM, the coefficient of correlation was worked out. Total sixteen independent variable of both registered farmers and traders were studied.

*Age and attitude* : Table 3. reveals that there was negative and non-significant correlation ( $r = -0.022^{NS}$ ) between age of the farmers and their attitude towards e-NAM. Table 3, reveals that there was negative and non-significant correlation ( $r = -0.148^{NS}$ ) between age of the traders and their attitude towards e-NAM. Thus, the family type was found to be an independent factor in attitude towards e-NAM. Similar results were obtained by *Patel (2006)* and *Sidhe (2011)*.

*Family type and attitude* : Table 3 reveals that there was negative and non-significant correlation ( $r = 0.192^{NS}$ ) between family type of the farmers and their attitude towards e-NAM and also there was negative and non-significant correlation ( $r = 0.236^{NS}$ ) between family type of the traders and their attitude towards e-NAM. It reflects that family type did not play vital role in application of e-NAM. Thus, the family type was found to be an independent factor in attitude towards e-NAM. Similar results were obtained by *Patel (2006)* and *Darandale (2010)*.

*Education and attitude* : It is evident from Table 3, that there was positive and highly significant correlation

**Table 2. Ranking of Attitude statement of farmers and traders on the basis of mean percent score**

Statements	Attitude of farmers			Attitude of traders		
	MS	MPS	Rank	MS	MPS	Rank
e-NAM process is lengthier than open auction system (-)	2.2	44	14	3.76	75.2	1
Bid price is lower than open auction bidding price (-)	3.36	67.2	10	2.14	42.8	13
Problem to understand the language in projection screen (-)	3.26	65.2	11	3.24	64.8	8
Less number of bidders taking part in e-NAM (-)	2.35	47	13	1.82	36.4	14
e-NAM has a fast software (+)	3.6	72	9	2.9	58	9
e-NAM process is more easy than open auction process (+)	4.86	97.2	1	2.84	56.8	10
Willing to sell farm produce through e-NAM (+)	4	80	6	3.46	69.2	5
Do you share information about e-NAM among other farmers (+)	2.86	57.2	12	2.7	54	12
I believe that product selling through e-NAM is helping farmer in getting rational return (+)	4.8	96	2	3.6	72	4
e-NAM process is difficult for illiterate people(-)	4.4	88	4	3.68	73.6	2
There is no risk in adoption of e-NAM (+)	4	80	7	3.44	68.8	6
e-NAM process does not require any specific training (+)	3.75	75	8	2.82	56.4	11
e-NAM scheme is more beneficial for farmers than open auction bidding (+)	4.7	94	3	3.28	65.6	7
Agricultural product weighing through e-NAM takes more time than open auction bidding (-)	4.1	82	5	3.66	73.2	3

( $r = 0.607^{**}$ ) between education of the farmers and also between education of the traders and their attitude towards e-NAM ( $r = 0.809^{**}$ ). Similar results were obtained by *Darandale (2010)* and *Shinde (2011)*.

*Social participation and attitude* : It can be seen from data presented in Table 3 that social participation had positive and significant correlation ( $r = 0.203^*$ ) with their attitude of farmers and traders ( $r = .280^*$ ) with their attitude towards e-NAM. The possible explanation might be that majority of the respondents were members in co-operative society and other similar organizations to get loan or input for e-NAM.

**Table 3. Relationship between profile of the farmers and traders and their attitude towards e-NAM.**

Independent variable	'r' value of farmers attitudes	'r' value of traders attitudes
Age	-0.0221 <sup>NS</sup>	-0.1484 <sup>NS</sup>
Family Type	0.192 <sup>NS</sup>	0.236 <sup>NS</sup>
Education	0.607 <sup>**</sup>	0.809 <sup>**</sup>
Occupation	0.138 <sup>NS</sup>	
Social participation	0.203 <sup>*</sup>	0.280 <sup>*</sup>
Income	0.205 <sup>*</sup>	0.378 <sup>**</sup>
Land holding	0.279 <sup>**</sup>	
Information seeking behavior	0.534 <sup>**</sup>	0.292 <sup>*</sup>
Mass media exposure	0.327 <sup>**</sup>	0.453 <sup>**</sup>

\*Significant at 0.05 level and

\*\*Significant at 0.01 level of probability

The results are partially supported of the findings *Patel & Patel, (2013)*.

*Land holding and attitude* : The data presented in the Table 3, indicate that land holding of farmers had positive and highly significant correlation ( $r = 0.279^{**}$ ) with their attitude towards e-NAM. It can be concluded that attitude of the farmers towards e-NAM was influenced by their size of land holding. Similar results were obtained by *Zala (2008)*

*Occupation and attitude* : The data given in Table 3, reveal that occupation of farmers had positive and non significant correlation ( $r = 0.138$  NS) with their attitude towards e-NAM. This finding has been supported by the findings of *Patel and Chauhan (2004)*, *Sharnagat (2008)* and *Trivedi (2010)*.

*Annual income and attitude* : It is apparent from the data presented in Table 3 that annual income of farmers had positive and significant correlation ( $r = 0.205^*$ ) and traders had also positive and highly significant correlation ( $r = 0.378^{**}$ ) with their attitude towards e-NAM. The results are partially supported of the findings of *Patel (2006)*.

*Information seeking behavior and attitude* : The data depicted in Table 3 indicate that information seeking behavior of farmers had positive and highly significant correlation ( $r = 0.534^{**}$ ) and traders had positive and significant correlation ( $r = 0.292^*$ ) with their attitude towards e-NAM. It can be inferred that contact with extension agency by the e-NAM farmers was found

to be positively and significantly correlated with the attitude of farmers and traders towards e-NAM. This findings supported by the Patel (2006).

*Mass media exposure and attitude* : It is clear from the data depicted in Table 3, that mass media exposure of farmers had positive and significant correlation ( $r = 0.327^*$ ) traders had positive and highly significant correlation ( $r = 0.453^{**}$ ) with their attitude towards e-NAM. The reason for the above might be that greater contact with larger society via mass media exposure seemed to be associated with higher attitude towards e-NAM. This finding is similar to reported by Zala (2008) and Darandale (2010)

## CONCLUSION

Access of the e-NAM portal provides information of the price of the various agricultural produce. The gap between farmers and traders has been minimized. It provides a transparent bidding mechanism for all producers and traders in real time. It increases completion among them and transaction costs are drastically reduced or even eliminated. The development in agriculture is of course strictly linked with the adoption of the internet, mainly by the farmers. Reports show that farmers are slightly behind the urban general population in adoption. Since, our economy is largely agriculture based, the role of ICT is vital for its accelerated and an efficient growth. It also reduces the time lag, which the traditional selling procedure includes. Therefore, this situation calls for the study on the adoption and implementation of the eNAM.

## CONFLICTS OF INTEREST

The authors have no conflicts of interest.

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