Awareness and Challenges Encountered by Farmers in Marketing Agricultural Produce via the e-National Agriculture Market (e-NAM)

ABSTRACT

Present study is based on awareness and constraints perceived by the farmers about application process of e-NAM (Electronic National Agriculture Market) in Sriganganagar district of Rajasthan. Total of 10 villages were selected for the selection of respondents from both mandis. A number of ten farmers were selected from each village and therefore, total of 100 farmers were selected from both mandis. To find out the most significant awareness and constraints which influence in adoption of e-NAM. The frequency, mean percent score WMS and Garret ranking were used to identify awareness and constraints. The result revealed that management of perishable produce especially storage in mandi is the foremost constraint in adoption of e-NAM from farmer side.

Key Words: Awareness, Constraints, e-NAM, Market and Suggestions

INTRODUCTION

(Add few sentences about traditional marketing system and importance of electronic platform for agricultural marketing) Thus, structural changes in agricultural marketing system in India in the form of Electronic National Agriculture Market (e-NAM) initiative may prove a game changer in the annals of agricultural marketing. The e-NAM network was officially launched on 14 April 2016. As of 1st May 2020, a total of 785 APMC mandis across 17 states and 2 union territories (UTs) are integrated into the platform. The official website of the system is http://www.enam.gov.in which updates the status of implementation of the scheme. It intends to benefit directly to the farmers by better price realization and reducing transaction cost, elimination of cartels and price manipulation by local trading groups (Chand, 2016). The National Agriculture Market (e-NAM) serves as a pan India electronic trading portal that links existing Agricultural Produce Marketing Committee (APMC) markets to establish a unified national market for agricultural commodities. The ~~eNAM~~ e-NAM Portal acts as a comprehensive, single-window service for all APMC-related information and services. This encompasses details such as commodity arrivals and prices buy and sell trade offers, and the ability to respond to trade offers, among other services. While the physical flow of agricultural produce continues through traditional markets, the introduction of an online market via e-NAM

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reduces transaction costs and addresses information asymmetry (Kumar *et al* 2023). This initiative creates a unified market through an online trading platform at both the State and National levels, promoting consistency and streamlining procedures across integrated markets. It eliminates information gaps between buyers and sellers, facilitates real-time price discovery based on actual demand and supply, ensures transparency in the auction process, and grants farmers access to a nationwide market. The pricing on this platform reflects the quality of the produce, allowing for online payments and providing consumers with access to better-quality produce at more reasonable prices. Honorable Prime Minister Narendra Modi inaugurated the e-NAM electronic trading platform during the 'Gramoday se Bharat Uday Abhiyan' in Mhow, Madhya Pradesh, on the 125th anniversary of B R Ambedkar (Source: PTI)

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METERIAL AND METHOD

The research was carried out in the Sriganganagar district of Rajasthan. The selection of this district was based on the criterion of having the highest number of registered farmers under the e-NAM scheme. Two mandis connected to e-NAM in Sriganganagar, namely Sriganganagar mandi and Padampur mandi, were chosen for the study. A total of 10 villages were randomly selected, and from each village, 10 farmers were chosen randomly, resulting in a total of 100 participants. Data were gathered through personal interviews using a pre-tested schedule. The qualitative data obtained were converted into quantitative form. To achieve the study's objectives, the collected data were tabulated and analyzed using appropriate statistical measures, including mean, standard deviation, garret ranking and association.

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Garret Ranking:

$$\text{Per cent position} = \frac{100*(\text{Rij}-0.50)}{\text{Nj}}$$

Where, R, stands for rank given for the ith (i= 1, 2, 3...,7) factor by the jth (j= 1, 2, 3...7) individual

Nj stands for number of factors ranked by jth individual

Fig. 1 Local of the study area

RESULTS & DISCUSSION

Profile characteristics of the respondents:

The stated data in table 1, reveals that the predominant demographic profile of the participants indicates that the majority were middle-aged (56.00%), possessed a primary level of education (34.00%), had a medium-sized landholding (46.00%), engaged in medium social participation (66.00%), and reported an annual income ranging from Rs. 2,70,000 to Rs. 4,56,000 (51.00%). Furthermore, a substantial portion exhibited moderate levels of mass media exposure (57.00%), and medium information seeking behavior (58.00%), the results were similar to studies done by Jhansi and Kalal (2022) and Shubham *et al* (2022).

Table 1.: Socio-economic profile of respondents

Age	**Frequency**	**Percentage**
Young aged (below 35 ~~yr~~ year)	18	18.00
Middle aged (between 35-50 ~~yr~~ year)	56	56.00
Old aged (above 50 ~~yr~~ year)	26	26.00
Education		
Illiterate	22	22.00
Primary	34	34.00
Secondary	26	26.00
Sr. Secondary	13	13.00
Under Graduate	5	5.00
Landholding		
Marginal (Less than 1 ha)	12	12.00
Small (Between 1-2 ha)	29	29.00
Medium (Between 2-4 ha)	46	46.00
Large (More than 4 ha)	13	13.00

Social Participation		
Low (below 17)	13	13.00
Medium (between 17-20)	66	66.00
High (more than 20-)	21	21.00
Annual Income		
Low (less than 2.7 lacs)	24	24.00
Medium (between 2.7-4.56 lacs)	51	51.00
High (more than 4.56 lacs)	25	25.00
Mass Media Exposure		
Low (below 21)	20	20.00
Medium (between 21-25)	57	57.00
High (more than 25-)	23	23.00
Information Seeking Behavior		
Low (below 19)	18	18.00
Medium (between 19-23)	58	58.00
High (more than 23-)	24	24.00

Awareness of respondents regarding e-NAM

It was observed from the Table 2. that, majority of the respondents (64.00%) possessed medium level extent of awareness about e-NAM scheme followed by high (23.00) %) and low (13.00%) extent of awareness about e-NAM scheme. The results were similar to studies done by C.C.S National Institute of Agricultural Marketing (2011). The adoption rate of an innovation is closely associated with the user's understanding of that innovation. Therefore, it was deemed essential to assess the knowledge level of the respondents comprehensively, covering all aspects of the technologies imparted to them. In this study, knowledge is defined operationally as the body of information comprehended by the respondents regarding protected floriculture technology. This section of the study examines both the overall knowledge level and the technology-specific knowledge levels of the respondents, with the findings presented accordingly.

Table 2.: Distribution of the respondents according to their extent of awareness

Sr. No.	Extent of Awareness (Score)	Respondents(n=100)	
		Frequency	percentage
1	Low level (up to 6.14)	13	13.00
2	Medium level (6.14 to 10.76)	64	64.00
3	High level (above 10.76)	23	23.00
Mean=8.45, SD=2.31			

Extent of awareness of respondents about e-NAM

It was observed from the Table 3., rank ordering of statements on extent of awareness about that, majority of the respondents were heard about e-marketing (rank *I*) followed by awareness about witnessed

the computerization of the market (rank *II*). While rank (*III*) shows those participated in awareness session know about different features of scheme like through this scheme commodity returns will be directly transferred to a bank account. Followed (IV) by awareness about taken part in an e-NAM awareness session (Subash *et al* 2018), fewer respondents were familiar with the e-NAM scheme (V). While next rank (VI) portal provides daily price information for various commodities, awareness about sell your produce to different markets from any Agricultural Produce Market Committee (APMC) through this scheme (VII). Farmers felt lack of information about e-trading practices in the market (VIII). While rank (IX) shows little awareness about prices commensurate with quality through this scheme. Also rank IX shows no awareness about that the portal is available in multiple languages so they were no visited the portal. The ranking of statements on extent of awareness of the respondents about e-NAM scheme indicates that farmer well aware about computerization in market which is necessary for scheme but poorly aware about core functioning of scheme (Sonawane *et al* 2020)

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Table 3.: Rank ordering of the statements according to extent of awareness of respondents about e-NAM scheme. (n=100)

Sr. No.	Statement about e-NAM Program	Yes	Partially	No	Total Score	WMS	Rank
1	Are you familiar with the e-NAM scheme?	42 (42.00)	23 (23.00)	35 (35.00)	107	1. 07	*V*
2	Have you heard of e-Marketing?	55 (55.00)	15 (15.00)	30 (30.00)	125	1.25	*I*
3	When did the e-NAM scheme commence?	38 (38.00)	13 (13.00)	49 (49.00)	68	0.89	*XII*
4	Are you acquainted with the e-NAM portal?	40 (40.00)	15 (15.00)	55 (55.00)	95	0.95	*XI*
5	Have you explored the portal?	36 (36.00)	15 (15.00)	49 (49.00)	87	0.87	*XIII*
6	Are you aware that the portal is available in multiple languages?	38 (38.00)	21 (21.00)	41 (41.00)	97	0.97	*X*
7	The portal provides daily price information for various commodities	39 (39.00)	27 (27.00)	34 (34.00)	105	1.05	*VI*
8	Have you taken part in an e-NAM awareness session?	45 (45.00)	19 (19.00)	36 (36.00)	109	1.09	*IV*
9	Are you aware that farmers receive Minimum Support Price (MSP) when participating in this scheme?	15 (15.00)	10 (10.00)	75 (75.00)	40	0.40	*XVI*
Regarding the market							
10	Do you have knowledge about different practices in the market?	25 (25.00)	34 (34.00)	41 (41.00)	84	0.84	*XV*

11	Have you witnessed the computerization of the market?	44 (44.00)	32 (32.00)	24 (24.00)	120	1.20	*II*
12	Are you informed about e-trading practices in the market?	37 (37.00)	29 (29.00)	34 (34.00)	103	1.03	*VIII*
13	Do you know about other e-Marketing practices?	31 (31.00)	23 (23.00)	46 (46.00)	85	0.85	*XIV*
Regarding other features of the scheme:							
14	Are you aware those prices commensurate with quality through this scheme?	35 (35.00)	29 (29.00)	36 (36.00)	99	0.99	*IX*
15	Do you know that commodity returns will be directly transferred to a bank account?	45 (45.00)	28 (28.00)	27 (27.00)	118	1.18	*III*
16	Are you aware that you can sell your produce to different markets from any Agricultural Produce Market Committee (APMC) through this scheme?	39 (39.00)	26 (26.00)	35 (35.00)	104	1.04	*VII*
*(Figures in parenthesis indicates percentage to total value of corresponding category of independent variable)							

Challenges encountered by participating farmers in e-NAM trading activities and recommendations for addressing these challenges

Challenges encountered by respondent regarding trading activities of e-NAM

It can be seen that major constraints faced by the farmers were: Limited participation of all traders in the scheme (96.00%), lack of awareness programs about the scheme (93.00), similar reported by Singh *et al* (2016) and incomplete information available about e-Marketing (92.00%), reported by Jena *et al* (2023) and Pant, K & Singh, U (2014), followed failure of local traders and extension workers to communicate information (90.00%), ineffective use of appealing advertising methods by extension agency (85.00%), lack of awareness among relatives and friends about e-Marketing (78.00%), and farmers' lack of literacy in utilizing e-Marketing channels (60.00%). Results were on lines with Tyngkan and Hehlangki (2018), Kandpal (2022) and Kumar *et al* (2022). An attempt was made to identify the challenges faced by the respondents while getting aware about e-NAM scheme. Their responses were tabulated after calculating the frequency and percentage as shown in following table.

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Table 4: Constraints faced by the respondent farmers

Sr. No.	Constraints	Garrett's Mean score	Rank
1	Farmers' lack of literacy in utilizing e-Marketing channels	60.21	*VIII*
2	Ineffective use of appealing advertising methods	85.23	*V*
3	Failure of local traders and extension workers to communicate	90.09	*IV*

	information		
4	Lack of awareness among relatives and friends about e-Marketing	78.48	*VI*
5	Incomplete information available about e-Marketing	92.67	*III*
6	Infrequent advertisement campaigns	72.17	*VII*
7	Absence of awareness programs about the scheme	93.57	*II*
8	Difficulty in understanding displayed content due to it being in English	40.87	*IX*
9	Limited participation of all traders in the scheme	96.03	*I*

Recommendations made by respondents

The suggestions showed that 96.03 per cent respondents wanted promotion through farmer and trader organizations followed by 93.57 per cent farmer suggested engagement of local traders and extension workers in communication with farmers (Meghwal and Jadav 2021) and ensuring the inclusion of all traders in the scheme (92.67 %), Implementation of awareness programs about the scheme at Agricultural Produce Market Committees (APMCs) (90.09 %).

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Table 5: Recommendations made by the respondents to overcome the challenges:

Sr. No.	Recommendations	Frequency	Percentage	Rank
1	Implementation of awareness programs about the scheme at Agricultural Produce Market Committees (APMCs)	90	90.00	*IV*
2	Engagement of local traders and extension workers in communication with farmers	93	93.00	*II*
3	Utilization of television and radio for advertising	87	87.00	*V*
4	Promotion through farmer and trader organizations	95	95.00	*I*
5	Ensuring the inclusion of all traders in the scheme	91	91.00	*III*

CONCLUSION

In conclusion, the study reveals a predominant demographic profile among participants, with a majority being middle-aged, having a primary level of education, medium-sized landholding, medium social participation, and reporting an annual income within the range of Rs. 2,-70,000 to Rs. 4,-56,000. Furthermore, a substantial portion demonstrated moderate levels of mass media exposure and medium information-seeking behavior. The majority of respondents exhibited a medium level of awareness about the e-NAM scheme, with fewer participants showing high or low levels of awareness. The ranking of statements on the extent of awareness indicates that farmers are well aware of the computerization in the market, which is crucial for the scheme, but are less informed about the core functioning of the scheme. Limited participation of all traders in the scheme, lack of awareness programs, and incomplete information about e-Marketing were identified as key challenges. The suggestions provided by respondents highlight the need for promotion through farmer and trader organizations, engagement of local traders and extension workers in communication, and ensuring the inclusion of all traders in the

scheme. Implementation of awareness programs at Agricultural Produce Market Committees (APMCs) is recommended, along with addressing issues such as the failure of local traders and extension workers to communicate information, ineffective advertising methods, and lack of awareness among relatives and friends, and farmers' limited literacy in utilizing e-Marketing channels. These findings underscore the importance of targeted interventions to enhance awareness and participation in the e-NAM scheme.

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