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Effectiveness of national agriculture market (e-NAM) perceived by the farmer's

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Abstract

The present study was carried out purposively in Warora APMC of Chandrapur district of Maharashtra State as the e-NAM scheme with sample size of 120 e-NAM registered farmers namely 6 villages Mohabala, Nagri, Warora, Wanoja, Chinora, and Ekarjuna from the Warora tahsil. From each of the selected villages, 20 e-NAM registered farmers were selected by using simple random method on the basis of list was obtained from APMC supervisor. To find out Effectiveness of e-NAM as perceived by the registered farmers. The findings of the study revealed that With the introduce of Effectiveness of e-NAM, it was observed that, majority (80.00%) of the respondents were medium category of overall knowledge followed by (12.50%) of respondents were observed in high level of knowledge of registered farmers about the functioning/features of e-NAM and majority (65.00%) of the respondents were medium category of effectiveness followed by (22.50%) of respondents were observed in high level of effectiveness of e-NAM as perceived by the registered farmers.

Keywords: National agriculture market (e-nam), APMC, knowledge, effectiveness

Introduction

In India agricultural marketing was governed by a set of public owned wholesale markets which were established during the colonial period under the APMC Act. The regulatory mechanism, which is more than 100 years old, no doubt, has put in place some good marketing practices but the system is also fighting with few shortcomings due to various regulatory mechanisms and restrictions on trading of agricultural commodities. Therefore, to mainstream the activities the Government of India brought reforms to the sector through the Model Act 2003 and APLM Act 2017. The Model Act envisaged removal of restrictions on movement of commodities, single levy of market fee, promotion of alternative marketing system, promotion of ICT etc. The objective of all these attempts was to bring in reforms, mainly to remove restrictions in agricultural trade and induce a competitive environment by ensuring more and more participation of traders by leveraging ICT and alternative market channels.

The agriculture sector is a significant part accounting for about 17 per cent of GDP (Gross Domestic Product) and employing around 60 per cent of the population (Aggarwal *et al.*, 2016) ^[1]. Food grain demand increased from 51 million tonnes in 1950-51 to 297 million tonnes in 2019-20 (IBEF, 2021) ^[3]. The Government of India (GOI) has paid more attention for improving coverage of irrigated land and increasing the financial capabilities of farmers. However,

there has been paid less attention for improving the post-harvest infrastructure of agricultural marketing (NABARD, 2018) ^[5]. Although India is among one of the top producers of agricultural commodities, the farmers face uncertain marketing facilities, lack of infrastructure, transportation problems, and interference of middlemen (Saxena *et al.*, 2017) ^[9].

Prime Minister Narendra Modi launched an electronic trading platform, the national agriculture market — e-NAM for farmers to sell their produce at 'Gramoday se Bharat Uday Abhiyan' in Mhow, Madhya Pradesh on the occasion of 125th anniversary of Dr. B. R. Ambedkar.

After having existence of 4 years, e-NAM has made its own mark in fulfilling its own goals and objectives towards the welfare of the farming community. Several amendments have been made in terms of features, rules, regulations, operational mechanisms to suit to the current situation. With the overall success of 585 mandis in Phase 1 and further expanding its wings to integrate 415 new mandis in Phase 2, the e-NAM platform now has a total number of 1000 mandis across 18 States & 3 UTs. The brain child of central government had faced several pros and cons in its implementation. A great deal of market networking has been conceptualized and formalized at different levels to meet the marketing demands of farming community for the realization of remunerative prices to their produce. Accordingly, all the initiations of e-NAM one way or other

tried to motivate farmers to be a successful stakeholder of e-NAM. However, several anomalies both at organizational and personal level thwarted the ultimate goal of provision of remunerative prices for farmers produce. As the scheme is aimed at achieving upmost success in supporting the farming community in enhancing their farm income. The participation of the farming community in both qualitative and quantitative terms was supposed to be at higher side. But realistically the scheme has not been reaching the farming community because of its operational encroachments by the other stakeholders of the scheme. Hence the present study is proposed to explore the current operational mechanism been followed in e-NAM both in line and in contrary with the guidelines prescribed for effective implementation of e-NAM. The study also projects the best possible ways and means to improve the quality of functioning of e-NAM and to give strong support to farming community.

Materials and Methods

The study was conducted during the year 2023-24 in Chandrapur district in the jurisdiction of Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola of Maharashtra State. In APMC Warora of Chandrapur district, six villages namely Mohabala, Nagri, Warora, Wanoja, Chinora, Ekarjuna were selected purposively on the basis of presence of highest number of e-NAM registered farmers in Warora APMC as per the list received from APMC Warora. From each of the selected villages, 20 e-NAM registered farmers were selected by using simple random method on the basis of list was obtained from APMC supervisor. Thus, total sample comprised of 120 respondents. The exploratory research design was used for the study. In light of objectives, the interview schedule was prepared and respondents were interviewed at their home and field. The data collected by personal interview method were processed, tabulated, classified and analysed. On the basis of mean and S.D, the classification of respondents in low, medium and high was done following the procedure low: [Below mean-S. D] medium: [Between mean + S.D] and high: [Above mean + S.D].

Results and Discussion

The findings of the study had been presented under the following headings.

Distribution of respondents according to their level of Knowledge on functioning / features of e-NAM

The data regarding the overall knowledge level of respondents about Knowledge on functioning / features of e-NAM is presented in Table 1.

Data presented in Table 1, revealed that majority of e-NAM registered farmers (84.02%) were registered with e-NAM were aware of the registration fee; this may be attributed to their frequent visits and transactions when engaging in e-NAM trading. Nearly four fifth of farmers who were e-NAM registered (77.05%) were aware of entrance gate registration. Due to the requirement of document submission for trading in e-NAM, three-fourths of e-NAM registered farmers (75.00%) were aware of the paperwork needed for registration. Nearly three fourth (70.08%) e-NAM registered farmers know about pre-registration via portal and mobile application it is necessary to do

registration for bidding the produce. Above two third (69.17%) of e-NAM registered farmers know about generating the sale agreement after bid declaration in e-NAM for enhances transparency and operational efficiency in agricultural commodity trading. Due to awareness raised by the media, APMC representatives and nearby farmers nearly two third (65.83%) of the e-NAM registered farmers were aware of the year that e-NAM was implemented at Warora APMC. Nearly two third (65.00%) of the e-NAM registered farmers were aware about sample weight among e-NAM registered farmers is essential for ensuring fair pricing, transparency. Above three fifths (63.03%) of e-NAM registered farmers were aware of the allotment of a unique lot ID to each farmer's produce, which might be attributed to the requirement for lot ID generation for e-NAM trading. Above three fifth (62.05%) were aware of the quality assaying cost. This may be e-NAM registered farmers were knowledgeable about quality assaying. After lot ID creation registration, almost three fifth (60.08%) of the e-NAM registered farmers attributed to their active involvement and observation during e-NAM platform online trading.

Table 1: Distribution of respondents according to their Knowledge on functioning / features of e-NAM

Sl. No.	Statements	Yes		No	
		Freq.	%	Freq.	%
1	Year of implementation of e-NAM in Warora	79	65.83	41	34.17
2	Entry gate registration	93	77.50	27	22.50
3	Requisite documents	90	75.00	30	25.00
4	Registration fee	101	84.20	19	15.80
5	Unique lot ID.	76	63.30	44	36.70
6	Pre-registration	85	70.80	35	29.20
7	Quality assaying	73	60.80	47	39.20
8	Grading	69	57.50	51	42.50
9	Optionality of quality assaying	7	05.83	113	94.17
10	Digital Moisture meter is used to determine moisture of cotton	66	55.00	54	45.00
11	Categorization of produce	69	57.50	51	42.50
12	Quality assaying fee	75	62.50	45	37.50
13	Tradable parameters of cotton	63	52.50	57	47.50
14	Weight of the sample	78	65.00	42	35.00
15	Parameter determines the cost of raw cotton	53	44.17	67	55.83
16	Improving the quality of produce	98	47.50	22	52.50
17	Time period of e-Auction	62	51.67	58	48.33
18	Creation of e-auction	55	45.83	65	54.17
19	Participants in e-auction	60	50.00	60	50.00
20	Platform of bidding	53	52.50	67	47.50
21	Bid winner declaration	66	55.00	54	45.00
22	Choice to accept or reject bid	48	40.00	72	60.00
23	Generation of sale agreement	83	69.17	37	30.83
24	Mandatory signatures in sale bill	31	25.83	89	74.17

Table 2: Distribution of respondents according to their knowledge index level

SI. No.	Knowledge index level	Respondents(n=120)	
		Frequency	Percentage
1	Low(Upto33.33)	09	07.50
2	Medium(33.34 to 66.66)	96	80.00
3	High(Above66.66)	15	12.50
	Total	120	100.00
	Mean=61.45	SD=12.91	

It was revealed from the Table 2, nearly two third (80.00%) of e-NAM registered farmers had a medium level of knowledge, whereas (12.50%) and (07.50%) had high and low levels of knowledge, respectively. This study indicated that the majority of respondents had a moderate level of knowledge. The above distribution could be explained by the farmers lack of basic information required for commercial operations.

This knowledge could possibly have come from experience obtained when trading on e-NAM. On the other hand, some of the enthusiastic e-NAM registered farmers may be reviewing the e-NAM criteria to further assist their transactions.

The findings were consistent with those reported by Archana (2016)^[2], Pandya (2015)^[7] and Nagesh (2019)^[6] respectively.

Distribution of respondents according to their level of Effectiveness of e-NAM

Data presented in Table 3, revealed that three fifth (60.00%) of e-NAM registered farmers said that e-NAM was ineffective in offering prices commensuration with quality.

The most likely explanation for this distribution could be because, regardless of the quality of the produce, e-NAM traded farmers continue to realize non-remunerative pricing. The efficiency of e-NAM in reducing trade collusion and cartelization was rated as poor by more than two thirds (71.7%) of farmers who had registered with the program. The most likely cause of the a fore mentioned distribution may be the result of poor involvement from traders, regular low bids from local vendors in online auctions, and informal price quotes from vendors to farmers prior to auctions. The perception of transparency in the e-NAM weighment was deemed poor by (76.67%) of registered farmers. This could be explained by the fact that all of Warora APMC weighments Electronic weighment scales must be used for APMC in front of farmers. Online payments under e-NAM were viewed as good by more than half (54.2%) of farmers who were registered with the program. This could be explained by the possibility that the farmers had a significant decline in dishonest deductions made during e-NAM trading because the money was deposited straight into their bank accounts.

Table 3: Distribution of respondents according to their effectiveness of e-NAM

Sl. No.	Statements	Good		Fair		Poor	
		Freq.	%	Freq.	%	Freq.	%
1	Provision of remunerative price	52	43.3	27	22.50	41	34.20
2	Transparency in auction process	47	39.17	32	26.67	41	34.17
3	Maintaining stability in price	49	40.80	26	21.70	45	37.50
4	Increase in demand of commodity	14	11.67	40	33.33	66	55.00
5	Enhancing market arrivals	03	02.50	60	50.00	57	47.50
6	Infrastructural facilities	49	40.80	18	15.00	53	44.20
7	Participation of traders	39	32.50	30	25.00	51	42.50
8	Single window information service	60	50.00	16	13.33	44	36.67
9	Price commensuration with quality	23	19.17	25	20.83	72	60.00
10	Disintermediation of markets	10	08.33	56	46.70	54	45.00
11	Alleviation of cartel by traders	0	00.00	34	28.30	86	71.70
12	Reduction in transaction time	19	15.80	39	32.50	62	51.70
13	Deduction in cost of marketing	36	30.00	41	34.00	43	36.00
14	Minimization of commission charge	43	35.80	40	33.30	37	30.80
15	Online payment to the farmers	65	54.20	07	05.83	48	40.00
16	Dispute redressal mechanism	12	10.00	58	48.34	50	41.60
17	Transparency in weighment	22	18.33	06	05.00	92	76.67
18	Quality assessment	21	17.50	51	42.50	48	40.00
19	Transparency in payments	51	42.50	09	07.50	60	50.00

Table 4: Distribution of respondents according to their effectiveness index level

SI. No.	Effectiveness index level	Respondents (n = 120)	
		Frequency	Percentage
1	Low (Up to 33.33)	15	12.50
2	Medium (33.34 to 66.66)	78	65.00
3	High (Above 66.66)	27	22.50
	Total	120	100.00
	Mean= 56.92	SD= 15.79	

Data presented in Table 4, revealed that more than three fifth (65.00%) of the e-NAM registered farmers fairly effective, followed by more effective (22.50%) and less effective (12.50%) categories. The reason for that majority of e-NAM registered farmers may not have been satisfied and perceived effectiveness of e-NAM transparency in weighment, less effectiveness alleviation of cartel by

traders, less Price commensuration with quality, less effectiveness of increase in demand of commodity, more effectiveness of online payment to the farmers, respectively. The findings were consistent with those reported by Kishore (2019)^[4] and Raju (2020)^[8].

Conclusion

It can be concluded that increased market reach and transparency e-NAM has significantly improved market reach for farmers by providing them access to a larger pool of buyers beyond their local markets, improved efficiency the digitalization of the trading process has streamlined operations and reduced the time taken for transactions. The e-NAM platform minimizes the need for physical movement of produce to different markets, thus saving time and reducing costs associated with middlemen. Reduction in transaction costs e-NAM has helped in reducing transaction

costs through the elimination of various intermediaries and the reduction of associated commission fees. Impact on Farmer Income: However, its effectiveness is contingent upon overcoming existing challenges and ensuring comprehensive and consistent implementation across the country.

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