Insights into Implementation of National Agricultural Market scheme in Telangana

Shalendra[1] and B K Paty[2]

Abstract

A common market for agricultural produce in India is an idea at a time when agricultural marketing is faced with many challenges. An ICT based common market has the potential to address such limitations. Accordingly, the concept of electronic National Agricultural Market (eNAM) has been introduced by the Union Government. An attempt has been made, in the present paper, to understand the implementation of eNAM and assess its ability to live up to its potential. The observations made in selected markets in Telangana in terms of capturing arrivals, electronic price discovery and shortening of trade cycle hours triggers the hope for development of an agricultural market operating at the national level. The concept has the potential to catalyse the overall development of the sector, if over time, it is able to move beyond application of information technology by having a holistic development of the marketing system covering its different aspects. It is required to be pursued as a means and not as an end in itself and must be made to evolve accordingly.

Key words: Agricultural Marketing, National Agricultural Market, eNAM, Telangana

Introduction

A common market for agricultural produce in India is a concept which is timely and appropriate to the present complexities. Indian agricultural marketing is fraught with several challenges like fragmented supply chains, long chain of middlemen, high transaction costs, limited availability of infrastructure, poor market information system and absence of economies of scale, etc. An ICT-based common market for agricultural produce has the potential to address majority of the limitations faced by the sector, thereby ensuring a better price-discovery mechanism for the farmers.

Accordingly, a Central Sector Scheme for promotion of National Agricultural Market (NAM)was introduced by the Government on 14th April 2016 covering 585 markets in18 States/UTs. The national market facilitating barrier-free, inter-state trade would help in realizing favourable prices for both the farmers and consumers as the entire supply chain would be reasonably streamlined.

With this background, an attempt has been made in the present paper to analyse different aspects of the Scheme based on the lessons learned from its implementation in Telangana State, a leading state in terms of the number of markets covered.

[1]Deputy Director, National Institute of Agricultural Extension Management (MANAGE), Hyderabad.
Email: shalendra@manage.gov.in
[2]Director (OSPM), National Institute of Agricultural Extension Management (MANAGE), Hyderabad
Article Received on: 09-01-2019 Accepted on: 26-03-2019

Objective

The paper mainly aims at understanding the implementation of e-NAM in terms of trade process flow in an eNAM market, bidding process on the electronic platform, benefits from the initiative as perceived by different stakeholders and an assessment of influence of eNAM on different aspects of agricultural marketing. An attempt has also been made to present a model to facilitate inter-Mandi trade. The paper also suggests a way forward based on the insights obtained to make the scheme inclusive and farmer-friendly.

Methodology

The study is mainly based on the qualitative information collected through interaction with relevant stakeholders covering farmers, traders, commission agents, market staff and officials at the selected markets namely Nizamabad, Suryapet and Mahbubnagar in the State of Telangana. The sample markets were identified with the help of the Department of Agricultural Marketing, Govt of Telangana (Table 1). The secondary information made available by the selected markets has also been used.

Table 1. Sample Markets and Respondents

Sr No	Market	e-NAM Linkage	Distinction	Traders	CAs	Farmers
1	Nizamabad	14.04.16	Tendering from Open Auction	5	4	5
2	Suryapet	01.07.16	Comprehensive Coverage	4	6	8
3	Mahbubnagar	09.09.16	Weight Integration	2	4	2

Importance of a Common Market

E-NAM being an enabler of a common market for agricultural produce in India, a brief description of the importance of a common market will put the discussion in the right perspective. There is a need to remove different restrictions on the movement and storage of agricultural produce. The trade barriers and entry barriers have to be done away with to move towards perfect competition in the sector. Thus, there is a need for trade liberalisation in agriculture to help evolve a common market operating across states.

As restrictions on domestic trade are relaxed, prices stabilise across states and there are welfare gains to producers, consumers and the wholesale traders at the national level (Jha and Srnivasan, 2001). The removal of inter-state barriers would impact the realisation of better prices by the Indian farmers as supply chains between the producers and consumers would be reasonably streamlined (FAO, 2005).

In order to create an enabling environment for e-NAM, requisite reforms in agricultural marketing have accordingly been suggested by the Government through a Model APMC Act in 2003 and recently through

the Model APLM Act, 2017. The Act suggests various provisions required to facilitate inter-Mandi trade like single license, single point levy and electronic trade. However, there are aspects going beyond legal reforms for a common market operating across different states, like economic, technological and development of requisite infrastructure. The evolution of a national market calls for a comprehensive policy addressing different dimensions of a common market.

The FAO report for National Commission for Farmers also finds inter-state trade to be complex, being affected by restrictions imposed by different Acts, fiscal aspects, transport and agriculture trade (regulations) related issues. The evaluation of a free trade area has to deal with issues like heterogeneity in the rules of origin, non-tariff barriers, trade facilitation, technical regulations, infrastructural shortfalls, financing, standards and conformity with assessment procedures (EPRC, 2011).

Implementation of e-NAM in Sample Markets

Profile of Markets

E – NAM is being implemented in 585 markets covering 16 States and 2 UTs. Uttar Pradesh tops the states with 100 such e-NAM connected mandis of Agricultural Produce Marketing Committees (APMCs). In Telangana there are 180 APMCs, 270 market yards/ mandis. The state has 47 of the mandis covered under e- NAM. The profile of the selected Agricultural Produce Market Committee (APMC) markets in terms of year of establishment, major commodities being traded and strength of different functionaries is presented in Table 2. These markets are old and have sufficient market functionaries to handle volumes arriving in the market. These markets have come forward to implement e-NAM proactively. The staff and officials of all the markets were found to be enthusiastic to adopt the changes and mould their functioning as per the needs of e-NAM. The case of e-NAM was well supported by other stakeholders as well, like traders, commission agents and various market functionaries.

Table 2. Profile of Sample APMC Markets

Sr No.	Items	Unit	Suryapet Market	Mahabubnagar Market	Nizamabad Market
1	Established	Date	21.02.40	16.04.65	29.01.38
2	e-NAM Introduced	Date	01.07.16	09.09.16	14.04.16
3	Notified Area (Mandals)	No.	05	05	06
4	Major commodities	Name	Paddy, Pulses, Groundnut, Castor and Maize	Paddy, Groundnut, Maize, Castor and Ragi	Paddy, Maize, Turmeric, Soybean, Onion, Pulses and Oilseeds

Sr No.	Items	Unit	Suryapet Market	Mahabubnagar Market	Nizamabad Market
5	Market Functionaries	No.	873	326	710
6	Godowns	No.	02	05	06
7	Godowns Capacity	MTs	12400	5300	26000
8	Officers/ staff	No.	17	07	36
9	Staff (Outsourced)	No.	17	15	17

Trade Processes followed in e-NAM Market

The process flow at the sample markets after their integration with the e-NAM platform is depicted in the Figure 1. After a farmer arrives at the market with his/ her agri-produce, an electronic gate pass is generated at the market entry gate with a unique lot number to facilitate rest of the trade process. A gate pass contains information like name and address of the farmer and details about the commodity along with its approximate weight. Commission agents are allotted as per the preference of the farmer, as most of the farmers have prior relations with them. In case they are visiting for the first time, they are provided with the list of commission agents active in the market to choose one from the list. The commodities upon their arrival in the Mandi are unloaded in the sheds for the purpose of display. The lot ID Slip (lot number/ Gate Pass Slip) is displayed on the heap. The sample is collected at this stage for grading and assaying and assessment report is provided against the lot number on e-platform to facilitate the traders in taking trade decision.

Since the grading facility which was operational for some time is not functioning, the quality of the produce is assessed on the basis of physical examination by traders or their representatives. These heaps are visited by the licensed traders/ purchasers for physical assessment of the quality and quantity of each heap before quoting prices through online bidding. The traders quote their bids electronically for the lot they are interested in. Since, the facility is internet-based, the quotation by the registered traders may be made from anywhere by accessing their account using internet within the time prescribed for e-bidding by the Committee for that particular commodity. However, the traders are placing their bids using the facilities created by the Committee for the purpose except for the Nizamabad market. In Nizamabad market, traders are placing quotes through their own arrangements. In this way, the rates quoted by different traders for different commodities are collected. At the prescribed time, the system brings out the successful quotations i.e. highest prices quoted for different lots of commodities will appear on the monitor. The information about successful bids can be accessed from anywhere with the help of internet by the registered user. However, the same is also being disseminated by the APMC using different means like printouts and display board.

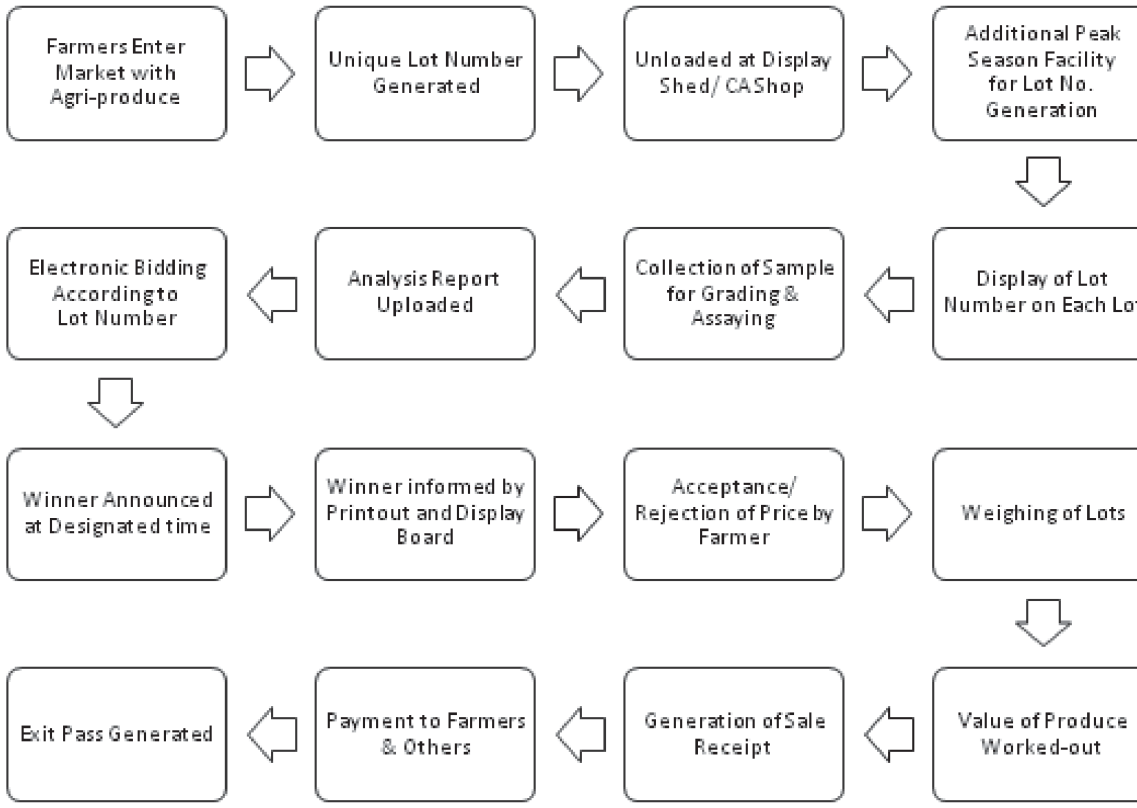

Figure 1 Flowchart depicting the Process Flow in the e-NAM Market

Source: *Field survey*

The consent of the farmers is obtained for the quoted price with the help of the concerned commission agent. If a farmer doesn't accept the quoted price of his produce, the same lot will be placed for next day's bidding. The affirmative reply of the farmer leads to recording of actual weight of the commodity. On getting the final weight, the primary sale bill is generated. The value of produce on the basis of price and weight is worked out and payment is made to the respective stakeholders like price to the farmers, fee to the APMC and charges to different functionaries. This completes the transaction at APMC with generation of exit passes.

Electronic Bidding Process

Competitive, transparent and scientific discovery of prices is an important objective behind introduction of regulations in marketing of agri-produce. Introduction of NAM will further enhance the degree of competition and transparency by shifting manual tendering process to the electronic platform at intra-market level and by encouraging participation from other markets for inter-Mandi trade.

The tender process for all the lots in case of each commodity in all the three sample markets is being performed electronically utilizing e-NAM portal. Around 40-60 active buyers participate, on an average, in the online bidding process every day.

The method of price discovery followed in the Nizamabad market before introduction of e-NAM was open auction. The market shifted to closed tender process considering its convenience in operation on e-NAM Platform. The market has successfully shifted to the new system on e-NAM platform.

The trade, though confined to the local market, has been able to bring in efficiency in terms of time as revealed by the number of lots managed by the markets even during peak days of arrivals. The maximum number of lots handled on e-NAM portal in a day varies from 1164 lots in Suryapet market to 11200 lots in Nizamabad market (Table 3). The timely completion of the trade cycle, generally by evening, also suggests the time efficiency in completion of different processes. The average number of bids per lots (worked out on sample dates) also suggest competitive and transparent discovery of prices though trade at present is confined to the local Mandi only. Each lot in selected markets on the sample date has received an average of 6.55 bids (Table 4).

Table 3. A Snapshot of Bidding Performance in Selected Markets

Sr No	Particulars	Maximum Lot Arrived on e-NAM in a Single Day	Highest Number of Bids for a single lot
1	Suryapet	1164	18
2	Mahabubnagar	1294	14
3	Nizamabad	11200	18

Table 4. Degree of Competition as Reflected by Average Number of Bids Received per Lot

Sl.No	Market	Date	No of Lots	No of Bids	Average No. of Bids per Lot	Max No. of Bids per Lot	Min No. of Bids per Lot
1	Suryapet	30.05.18	0201	00772	3.84	8	1
2	Mahabubnagar	27.02.18	1240	10260	8.27	12	3
3	Nizamabad	02.05.18	1634	09094	5.57	18	3
4	Average	—	3075	20126	6.55	18	1

Stakeholders' Response

The concept of e-NAM has been introduced not only to make the marketing system efficient but also to facilitate ease of doing business for different stakeholders. Accordingly, the perception of different stakeholders in the sample e-NAM markets has also been recorded.

All the stakeholders including traders, commission agents and farmers have expressed their satisfaction about the initiative. The biggest advantage was observed in terms of saving of time to perform the complete cycle of trade inside the market. Earlier, the complete cycle of trade from farmers' entry to dispatch used to take more than 12 hours and even used to go up to mid-night on a day of heavy arrival. However, after the introduction of e-NAM, on an average, the cycle gets completed by evening. The respondents were not able to speak clearly about the impact of NAM on parameters like arrivals and lowering of transaction costs. Some of the farmers felt better price realisation in the new system. The traders also observed fewer mistakes in the declaration of bids in the new system (Table 5). The grading and assaying facility was made available by the Mandi through a private player for about six months but was not effectively used by traders due to their reliance and trust on the age-old practice of physical examination. They also felt the information provided through assessment report was not fully useful for them, and they trust personal physical evaluation as most of the trade is taking place locally and no inter-Mandi trade is taking place. The traders not only expressed their convenience with their old practice of physically examining the agri-commodity but also expressed their limitation on the reliability of the assessment report.

Table 5. Response of Different Stakeholders on e-NAM Initiative (n=50)

Sr No	Items	APMC	Traders	Commission Agents	Farmers
1	Time Saving	√	√	√	√
2	Convenience	√	√	√	√
3	Transparent	√	√	√	√
4	Better Price	√	√	√	√
5	Bank Payment*	*X*	*X*	*X*	*X*
6	Grading & Assaying**	√	*X*	*X*	*X*

*Provision is available but restricted to limited number of payments

**The service was provided on pilot basis for six months under PPP arrangement

The market committees also feel that formal grading and assaying is quite challenging to integrate with the system as it is multi-faceted and time consuming. The arrangements made in the Mandi during pilot testing for grading and assessing were not sufficient even to cover 10 percent of the lots arriving on an average day. The market committees also found it highly challenging to integrate the bank for online payments due to the reluctance of both commission agents and farmers. It needs a comprehensive strategy including incentive for users and bringing bank on board to make them understand the complete requirements of the Mandi trade.

The market committee staff is of the opinion that e-NAM is a step in the right direction but will need a lot more to be done to make the system more efficient and vibrant. The present software under e-NAM provides for operations related to Mandi-trade though there are so many operations beyond trade by stakeholders like *Mandi*, traders and commission agents which need to be covered to enhance its acceptability. The software has to offer a complete solution covering both internal and external management.

Assessment of influence of implementation of e-NAM in Telangana

The e-NAM scheme (model)was introduced in the state in the first phase during 2016. Though it has to go a long way before implementing the same in a holistic framework, there are still quite some learnings that trigger the hope for developing an agricultural market operating at the national level. Though e-NAM in the sample markets is limited to intra-Mandi transactions only, the little achievements it has made so far, give hopes for a greater and efficient e-NAM platform facilitating inter-Mandi transactions. For example, it has now been able to capture 100 percent arrivals along with price being discovered completely on the electronic platform (e-tendering) leading to a better price discovery. The increase in average number of bids per lots suggests that markets are competitive. E-tendering has also brought about efficiencies in the form of shortening of trade cycle hours in the Mandi and the Mandi is also in a position to handle large number of lots in a day (Table 6).

It also provides scope for public private partnership as has been experimented by introducing the facility for grading and assaying in sample markets in partnership with a private player. Weighment has also been integrated on a pilot basis though it is challenging for various factors like arrivals of a large number of small lots, limited level of understanding of licensed weighment of technology, etc.

Table 6. Influence of e-NAM on Mandi Processes and Performance

Sr No	Areas	Influence	Basis
1	Arrivals	▪ 100 Gate Passes to capture arrivals	▪ Mandi
2	Price Discovery	▪ 100 percent e-tendering	▪ Mandi
3	Competition	▪ Improved	▪ Transparent e-tendering process ▪ Average number of bids received per lot on sample day
4	Mandi Efficiency	▪ Ability to handle large number of lots	▪ Maximum number of lots handled in a single day
5	Time Efficiency	▪ Ability to complete trade cycle quickly	▪ Trade cycle getting completed by evening ▪ Suggested by all stakeholders
6	Weighing	▪ Weighing integration	▪ Challenging but being pilot tested

Inter-Mandi trade in e-NAM

The study reveals that operations within the sample Mandis have, by and large, been successfully shifted to the electronic platform as defined under e-NAM. However, effecting inter-Mandi trade is still a challenge. The linkages envisaged in the e-NAM model for enabling inter-Mandi trade have been delineated in the following paragraph along with a diagrammatic presentation.

The role of physical markets is very crucial for successful implementation of e-NAM. These markets should be operated by technically qualified professionals. The markets should have access to IT infrastructure such as computers and *wifi* with uninterrupted internet connectivity. If the aim of the market is to get good price realization by the farmers, they must enrol good number of traders from across the country online. Every market can project their important arrivals, e.g. commercial crops like turmeric in Nizamabad market, by uploading the photographs of such commodities along with the broad quality parameters. In order to facilitate proper matching between demand and supply, the suppliers should have knowledge about the demand for the commodity at the other end of a channel. Market

studies of the commodities being traded in a market will go a long way towards realizing this objective. The market can also facilitate in transportation and other logistic services by empanelling good service agencies. Traders can obtain online quotes from the empanelled service agencies for availing different services at best possible prices. A diagramatic presentation for inter-mandi trade is depicted in the Figure 2.

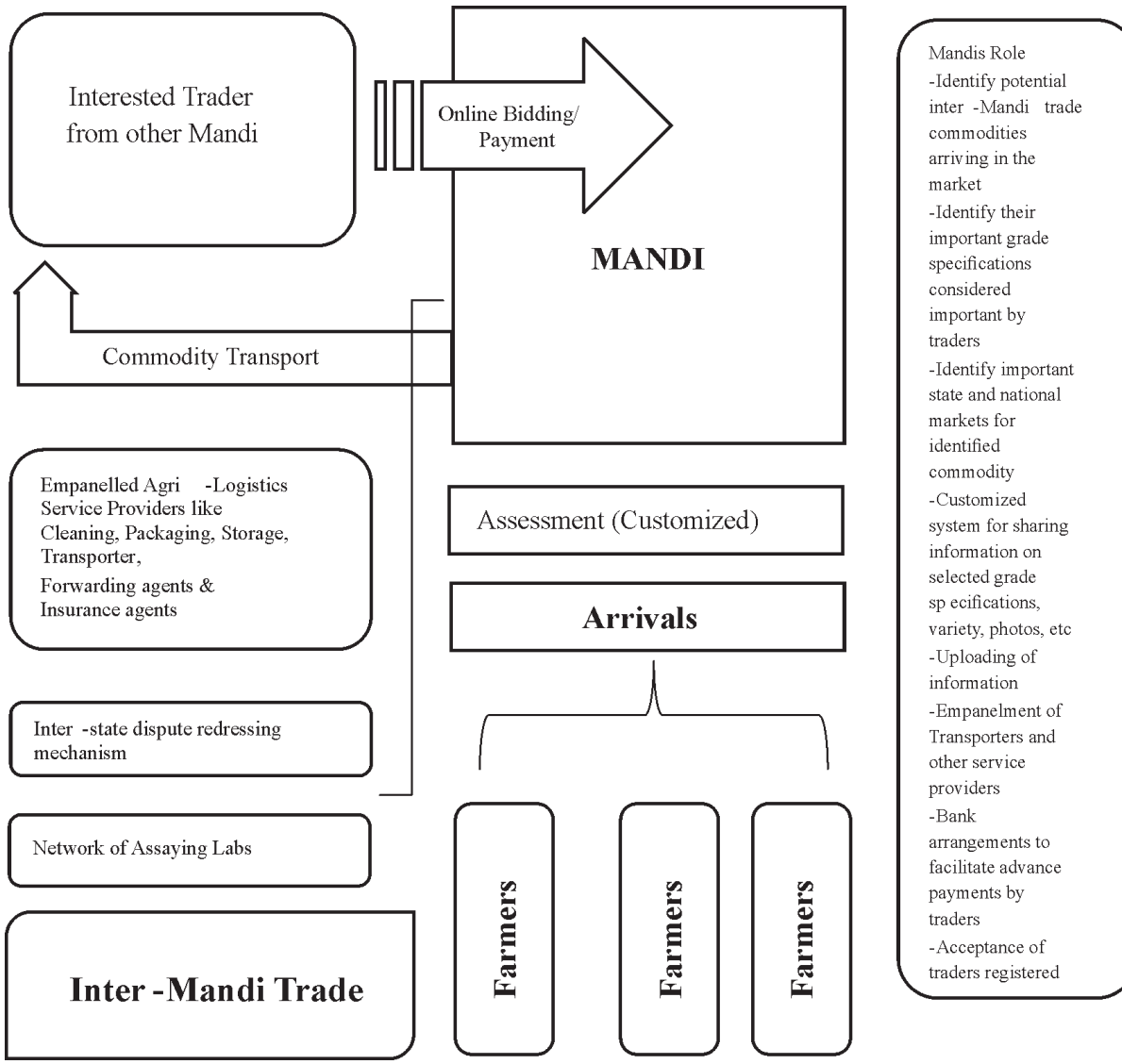

Fig.2. Inter Mandi Trade in e-NAM

A comprehensive online payment system addressing concerns of different stakeholders, mainly farmers, is the need of the hour to encourage online payment. Thus, e-NAM will facilitate ease of doing business in the sector and help the farmers fully harness the benefit of technology to their advantage and make the market competitive enough for better price discovery. In the long-run, the demand at various places will be integrated to help evolve a common market for agricultural produce in India.

The Mandis under e-NAM framework will have a revised role covering aspects like identification of trade in important commodities, identification of state and national level markets for identified commodities and developing a mechanism to share information about different commodities as per the requirement of the buyers.

Way Forward

The concept of e-NAM has the potential to overcome the challenges faced by the system, if it is, over time, able to move beyond application of information technology by having a holistic development of the marketing system covering aspects such as reforms, concerns of stakeholders, grading and assaying facilities, integration of banking, warehousing and logistics and, institutional support to address any possible dispute arising in the entire supply chain. A proper policy also needs to be put in place to offer solutions and incentives to different stakeholders, to make the concept truly inclusive.

There is a need to develop appropriate technologies and comprehensive strategy to integrate services like banking, grading and assaying, warehouses and weighment to help evolve a true national market for agricultural produce. There would be requirement to define role, responsibilities and norms for participation of different service providers and development of a mechanism to take care of any possible inter-Mandi disputes. The present software has also to go beyond tapping trade transaction to make the market completely automated from individual market level to unification of markets to enable inter-Mandi trade to happen. The software has to offer complete and integrated solution covering both internal and external management.

To conclude it may be mentioned that the e-National Agricultural Market has the potential to catalyse the overall development of the sector, if it is pursued as a means and not as an end in itself and is made to evolve accordingly.

Acknowledgement

The suggestions and support extended by Ms Usha Rani, IAS, Director General, MANAGE, Hyderabad in preparing the model to facilitate inter-Mandi trade is duly acknowledged.

References

Chand Ramesh (2016) e-Platform for National Agricultural Market. Economic and Political Weekly. 51 (28), 09 Jul, 2016. Accessed at https://www.epw.in/journal/2016/28/commentary/e-platform-national-agricultural-market.html

EPRC (2011) Economic Policy Research Centre Prospects and Challenges in the formation of the COMESA-EAC and SADC Tripartite Free Trade Area by Lawrence Othieno and Isaac Shinyekwa November, 2011. Economic Policy Research Centre, Makerere University Campus, Kampala, Uganda

FAO (2005) Towards an Indian Common Market: Removal of Restrictions on Internal Trade in Agriculture Commodities. Food and Agriculture Organization of the United Nations (FAO) Rome, 2005 http://www.fao.org/docrep/010/ai566e/ai566e00.HTM

GoI (2006) National Commission on Farmers: Serving Farmers And Saving Farming (III Report). Ministry of Agriculture and Farmers Welfare, Government of India

Jasna Cacic, Drazen Cacic, Jasenka Gajdos Kljusuric (2009) Reform of the EU Common Market Organization for Fruit and Vegetables. Pomologia Croatica. 15(1-2):55-66

Jha Sikha and PV Srinivasan. 2001. Food inventory policies under liberalized trade. International Journal of Production Economics Volume 71, Issues 1–3, 6 May 2001, Pages 21-29

Joshi P.K. (2015) Has Indian Agriculture Become Crowded and Risky? Status, Implications and the Way Forward. Indian Journal of Agricultural Economics. 70 (01):1-41

Laiglesia Juan R. de (2006) Institutional Bottlenecks for Agricultural Development: A Stock-Taking Exercise Based on Evidence from Sub-Saharan Africa. Working Paper No. 248. OECD Development Centre

Mariusz Maciejczak, Pawe Grzelak (—) From Common Policy to Common Institutions. Institutional Arrangement in the International System on the Example of the Common Agricultural Policy. Accessed through https://ageconsearch.umn.edu/record/205909/files/16-6-Maciejczak.pdf

NIAM (2015) Unified Common Market: A Concept Note. National Institute of Agricultural Marketing. Accessed through http:// www.ccsniam.gov.in/pdf-2015/BROCHURE-E%20maket.pdf