
National Agricultural Market: Present Status, Challenges and Way Forward

Shalendra and M.S. Jairath*

ABSTRACT

The National Agricultural Market is a virtual market envisaged to operate on an electronic trading portal but supported by physical markets at the backend. It has the potential to bring in transparency, competitiveness, efficiency and better participation of farmers by integrating wide range of functions and functionalities like farmers, commission agents, traders, electronic auction, clearing and settlement, payment gateway, logistics, warehousing, banking with facilities for grading and assaying. The concept is being implemented in India as a central sector scheme of the Ministry of Agriculture and Farmers Welfare with a target to network 585 markets over next three years. The concept may prove to be a game changer for Indian agriculture subject to adoption of more focused and balanced approach in participation of states and commodities, evolving detailed guidelines for service providers along with their roles, responsibility, charges and mechanism to address the disputes, development of a time bound strategy to educate different stakeholders on the importance and benefits available for them under NAM. Equally important will be to encourage states to undergo reforms mainly in provisions considered vital for implementation of the national market. The implementation of the concept in the light of above suggestions along with a mechanism for monitoring, supervision and evaluation by the third party with no conflict of interest with the implementing agencies may help emerge the national agricultural market as a real game changer for Indian agriculture.

Keywords: Agricultural marketing, National agricultural market.

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I

INTRODUCTION

Any dynamic system will undergo changes with the changes experienced in the surrounding environment. Same has been the case with agricultural marketing in India. The system experienced the introduction of regulations during the 1960s. The public control on all the agricultural marketing activities was introduced through establishment of regulated markets. The regulations served some important purposes, helped in getting rid of several malpractices and imperfections prevailing in agricultural market and ensured a fairer deal to the farmers in selling their produce (Acharya, 2004). However, the regulations were considered to be relevant only when private trade was underdeveloped, exploitative and controlled by mercantile power (Chand, 2012). Regulation is considered to have lost its relevance with liberalisation of trade and growing integration of the global economy (Kaplinsky and Morris, 2000). The restrictive nature of regulation for participation of private players and

*CCS-National Institute of Agricultural Marketing, Jaipur-302 033 (Rajasthan).

investment in agricultural marketing led to the introduction of reforms in agricultural marketing. Reforms helped in introducing some desirable changes in the system but could not attract private investment at the pace at which the changes were being observed on the production front. The un-integrated and distortion ridden agricultural markets, is one of the leading factors hindering the growth of agriculture in the country (Government of India, 2015). Accordingly, the Government of India emphasised the need for having a common agricultural market at the national level. The concept though seems to provide answers to many of the problems faced by traditional agricultural markets but rolling out such an ambitious concept is not going to be free from challenges.

Knowing the paramount importance of the subject, the paper outlines the concept of National Agricultural Market, its progress, readiness in terms of legislative provisions and infrastructure, constraints being faced and offer suggestions to move way forward. The paper is based on the secondary information available with various implementing agencies like Department of Agriculture and Farmers Welfare, Directorate of Marketing and Inspection, Small Farmers Agribusiness Consortium and other published sources. Primary information has also been collected through personal interaction on various constraints faced by different stakeholders in the implementation of the scheme.

The study is divided into five sections. Section II describes the need for national market for agricultural commodities. The definition of the concept along with details of similar initiatives experienced both domestic and overseas has also been presented in the section. Implementation of the concept as a central sector scheme along with its progress is discussed in Section III. The following section illustrates the challenges and constraints faced in the implementation of the scheme. The last section offers suggestions so as to facilitate the implementation of concept to be developed into a real game changer for Indian agriculture.

II

The government has intervened in the agricultural marketing from time to time to strengthen the system in the country. Public control was imposed by different states during 1960s which was of limited help. With the aim to make the system more conducive for the participation of private players and bring in the element of transparency and competitiveness, the reforms were introduced in agricultural marketing by bringing in the desired changes in the respective APMR acts regulating the system with focus primarily on provision for direct marketing, contract farming, markets by private/ cooperative sectors, single license and single point levy of market fee irrespective of the times the produce is sold and purchased. The reforms though have influenced some desirable changes but private investments in agricultural marketing have not been commensurate with the commercialisation and diversification that have taken place in the agricultural sector. The agricultural

markets in India still suffer from fragmentation, high transaction cost leading to issues like price volatility, interrupted internal flow of trade, poor incentives to enhance productivity and quality, weak market signals and poor competitiveness in the domestic and international markets. These limitations coupled with the changes taking place locally and globally advocated for innovative concepts operating beyond state boundaries by bringing in the element of harmonisation in the rules and regulations governing agricultural trade. The concept of National Agricultural Market (NAM) is a step in this direction with potential to offer competitive and transparent price discovery, integrated supply chain, price stabilisation, better price realisation and will help farmers getting included in the process of development. The concept envisages win-win situation to all the stakeholders.

The Need for National Agricultural Market

A market performs exchange, physical and facilitating function. The traditional markets focus too much on exchange function, i.e., buying and selling and neglect physical (storage, transportation, processing and standards) and facilitating functions (financing, risk coverage and market information and intelligence). In an environment of monopoly enjoyed by the government run markets, the possibility of upgrading the markets from present level seems to be limited. A national market by virtue of its requirement, competition, scale and ability to encourage larger participation by private players will help in up-scaling the markets to secondary and tertiary functions.

Reforms were introduced in agricultural marketing to create an enabling legal environment to encourage private participation, bringing in efficiency, provide alternative to the farmers and encourage inter-state trade through harmonisation of legislative provisions. The concept of national agricultural market is believed to push the same agenda of reforms forward.

The globalisation of trade will lead to competition. In order to stay competitive, the system may suppress farmers' price in case of failure of the marketing mechanism to respond to the emerging need. There is immediate need to improve the competitiveness of the system which will come through scale (integration of markets) and introduction of technology (investment).

The national market will help in containing the inflation on one hand and ensuring remunerative price to the farmers on the other. A competitive system supported by scale and technology is expected to distribute the commodity efficiently. It is the inefficiencies of the system that result in farmers getting low prices for their produce and consumer paying more than the fair price (Ponliano and Ranit, 2001).

Agricultural marketing system in the country is fragmented and need a mechanism to facilitate integration of all the functions and functionaries to reduce transaction cost by bringing in transparency and competitiveness in the system. The concept of National Agricultural Market operating across states on an electronic

platform shows the potential to help evolve a system at national level having integrated different service providers.

Concept and Other National and International Experiences

The National Agricultural Market is a virtual market envisaged to operate on an electronic trading portal but supported by physical markets (APMCs and other yards) at the backend. It is a comprehensive model envisaged to take care of other physical and facilitating functions of the market like storage, grading, packing, finance, insurance, promotion, etc. The National Agricultural Market will operate by networking existing APMCs and other market yards working under different states/UTs (including private market) to create unified national market for agricultural commodities which will facilitate smooth, speedy and efficient movement of agricultural commodities at the national level. The NAM does not provide an alternative to the existing APMCs and other markets operating under different states but is an attempt only to integrate the existing markets through an ICT based application to enhance the size of trade to induce competitiveness and efficiency in the system.

A similar concept with the aim to integrate whole markets spread across the state has been attempted by Karnataka. The state has created a joint venture in association with a private commodity exchange in the name of Rashtriya e-market Services Ltd. (ReMS) which offers automated auction and post-auction facilities like weighting, invoicing, market fee collection, accounting, assaying facilities in the markets, facilitate warehouse-based sale of produce, facilitate commodity funding, price dissemination by leveraging technology. Warehouse may operate as a sub-market yard to make them truly integrated with the marketing system envisaged in the concept. The electronic tender system is observed to have positive impact on arrivals, prices and has helped in better discovery of prices (NIAM, 2012).

The need for similar concepts has also been felt by countries like Ethiopia and African continent. The Common Market for Eastern and Southern Africa (COMESA) integrate 19 member countries with primary aim to form a large economic and trading unit that is capable of overcoming some of the barriers that are faced by individual states by eliminating the structural and institutional weaknesses of member states. Another initiative namely the East Africa Community Common market is based on providing provisions for free movement of goods, labour, services, and capital, which will significantly boost trade and investments and make the region more productive and prosperous. The geographical expansion and introduction of technology will facilitate in bringing in the efficiency and robust monitoring of the trade as has been observed in Ethiopia with the creation of commodity exchange and formal monitoring and enforcement (Meijerink *et al.*, 2014).

III

IMPLEMENTATION AND PROGRESS

The concept is being implemented in India as a central sector scheme of the Ministry of Agriculture and Farmers Welfare (MOA) through Agri-Tech Infrastructure Fund (ATIF) with a budgetary provision of Rs. 200 crores (2015-16 to 2017-18). The common e-market platform envisages networking of selected 585 wholesale markets in desirous States/UTs to be deployed in three phases, viz., 200 wholesale markets by September 2016, another 200 markets by March 2017 and remaining 185 markets by March 2018. A one-time grant of Rs. 30.00 lakhs will be given per mandi/agricultural market by the Ministry of Agriculture and Farmers Welfare, Government of India for installation of hardware/infrastructure. Any expenditure above this amount will have to be borne by the state government/APMC. However, the software will be supplied by the MOA to state/UTs free of cost which has been developed by a private player identified by the Ministry for the purpose.

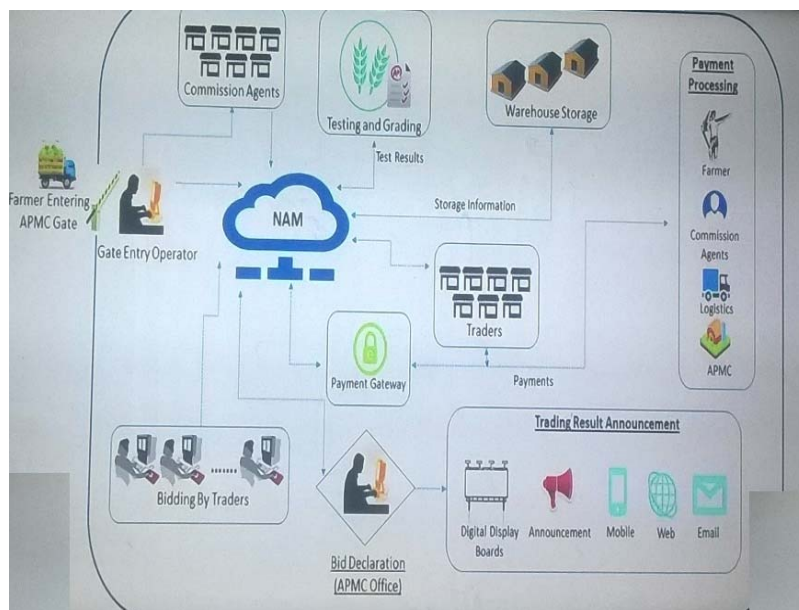
The identified wholesale markets across the country would be integrated with the common e-platform to provide farmers and traders with access to opportunities for purchase/sale of agri-commodities at optimal prices in a transparent manner across the country. Besides, private markets would also be allowed access to the e-platform thereby enhancing its outreach. The scheme is applicable on pan India basis. There is no state wise allocation under the scheme. However, desirous states would be required to meet the pre-requisites in terms of carrying out necessary agri-marketing reforms identified for the concept (discussed in the later section in the paper).

The concept is comprehensive in terms of its coverage for functions and functionaries like farmers, commission agents, traders, electronic auction, clearing and settlement, payment gateway, logistics, warehousing, banking with facilities for grading and assaying. The pictorial depiction of process of National Agricultural Market is presented in Figure 1.

The concept will offer its participating states with a wider, more competitive and harmonised market for their products at the national level. It will also help in strengthening farmers for producing quality produce for the market with higher levels of competition. Common market will also have its impact on integrating other concepts like banking, transportation and storage and will lead to various benefits to the farmers through better price realisation, quick payment settlement, input and technology delivery, etc.

SWOT Analysis

The successful implementation of the scheme will see considering numerous aspects like working on creating enabling trade environment, appropriate infrastructure, grades and standards, functions, participation of farmers, skill



Source: SFAC (2016).

Figure 1. Pictorial Depiction of Process of National Agricultural Market.

development, institutions, promotion, finance and insurance, inputs and extension services. The system in the long run will offer numerous benefits to a wide range of stakeholders. The features like transparency in price discovery, different services under common umbrella, competition due to large number of players, MIS helping integration of production with markets will have its impact on all the participants of the market from producer to consumer to the states. The SWOT analysis reveals some of the weaknesses and threats suffered by the common market. One of the key aspects would be to ensure participation of farmers to induce the desired changes at the grass root level. The system may exclude the key stakeholders like farmers in the absence of proper handling the component as has been observed in case of introduction of e-auction of cardamom in Kerala.

The scheme has been launched on a pilot basis on 14th April 2016 in 21 selected markets from 8 states covering 22 commodities (Table 1). The scheme plans to network 585 markets over next three years for quite a large number of agricultural commodities. However, looking at the total number of regulated wholesale markets in the country (more than 7000), the target seems to be miniscule and their spread across more than 22 commodities may further dilute the impact.

States like Gujarat, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Telangana, Uttar Pradesh, and Chhattisgarh are participating in the first phase of the scheme with a target of 200 markets to be completed by September 2016. The participation by limited number of states/UTs may not reflect the true spirit of national agricultural market.

THE SWOT ANALYSIS OF THE SCHEME ON NATIONAL MARKET

Stakeholders (1)	Strength (2)	Weakness (3)	Opportunity (4)	Threat (5)
Farmers	Market access Competition Transparency MIS - Information flow Ease of payment Proportionate share of value in value chain	Understanding Grading Cost	High value realization Value addition Access to global market Gender parity Balanced distribution of power Consumer rights Quality product	Social relation Skewed development towards selected commodity/ market of trade importance
Consumer	Price stabilisation Curtailed inflation Consumer satisfaction Wider product range Better supply			
Traders	Reduction in transaction cost Transparency Access	Understanding	Business expansion Equal opportunity environment	Competition Entry barriers
State/ APMC	Investment Efficiency Check evasion of market fee Facilitator services to citizen	Legal environment Standardized legal provisions Inadequate infrastructure	Regional cooperation Employment Technology driven efficiency Speedy reforms	Control of centre Inclusiveness Revenue sharing Availability of skilled manpower Organization and management of change

Source: Shalendra *et al.* (2016).

TABLE 1. DETAILS OF PILOT IMPLEMENTATION OF NATIONAL AGRICULTURAL MARKET

Sr. No. (1)	State (2)	APMC (3)	District (4)	Commodities (5)
1.	Gujarat	Patan	Patan	Castor seed
2.		Botad	Bhavnagar	Chana (Black gram)
3.		Himmatnagar	Sabarkantha	Wheat
4.	Haryana	Ellanabad	Sirsa	Mustard
5.		Karnal	Karnal	Wheat
6.	Himachal Pradesh	Solan	Shimla	Shelling peas
7.		Dhalli,		Shelling peas
8.	Jharkhand	Pandra, Ranchi	Ranchi	Mahua flower and Tamarind
9.	Madhya Pradesh	Karond, Bhopal	Bhopal	Chana (Black gram)
10.	Rajasthan	Ramganj Mandi	Kota	Chana (Black gram)
11.	Telangana	Tirumalgiri	Nalgonda	Paddy
12.		Nizamabad	Nizamabad	Turmeric
13.		Badepally	Mahboobnagar	Maize
14.		Hyderabad	Hyderabad	Onion
15.		Warangal	Warangal	Maize
16.	Uttar Pradesh	Sultanpur	Sultanpur	Wheat
17.		Lakhimpur	Lakhimpur Kheri	Wheat
18.		Lalitpur	Lalitpur	Wheat
19.		Bahraich	Bahraich	Wheat
20.		Saharanpur	Saharanpur	Wheat
21.		Mathura	Mathura	Wheat

IV

CHALLENGES AND CONSTRAINTS

The concept, though development oriented, is not going to be free from challenges. Some of the challenges in the successful implementation of a national agricultural market would be faced in terms of legislative provisions, suitable infrastructure, grades and standards, participation of farmers through aggregation and notification of service providers like banks, logistic and warehouses.

(i) Legislative Requirement

There are a number of legal barriers to the inter-state trade and physical movement of goods like common license, check gates, provision for electronic trade, Essential Commodity Act, etc. Establishing a national market will need uniform legal environment mainly in-terms of three provisions considered vital for the implementation of the scheme. These three provisions are e-trading, single point levy of market fee and uniform license system. States/UTs with provisions for these three reform measures will be eligible for release of assistance under the scheme. The status of key areas of reforms considered essential for the scheme is presented in the Table 2. The table suggests that only 12 states have so far made provisions for these three identified reforms measures. It is interesting to note that three states participating in the pilot launch of the scheme namely Uttar Pradesh, Haryana and Jharkhand have not undergone the complete reform process with Uttar Pradesh still to initiate the process for reforms. The absence of proper harmonisation of legal provisions considered essential may dampen the real effect of the scheme.

(ii) Infrastructure Availability

The integration of the existing markets with the national electronic portal, in addition to legal provisions, will require a large amount of physical, electronic and institutional infrastructure. The basic infrastructure required for getting networked with NAM as has been identified by the scheme implementation agencies is presented in Table 3. Making required infrastructure available is going to be one of the biggest challenge as suggested by the present status of infrastructure availability in the wholesale markets in the states volunteered for pilot implementation of National Agricultural Market. The basic agricultural marketing facilities like auction platform and information dissemination mechanism are not available in all the wholesale markets. The condition of facilities considered important for operationalisation of national market like grading labs is pathetic. The number of warehouses registered with Warehousing Development and Regulatory Authority are also limited which may restrict not only implementation of innovative initiatives like declaring warehouses as market place but also curtail them from supplementing the concept of national market (Table 4). Though, there is provision for central assistance to a maximum of Rs 30.00 lakhs per participating market but the responsibility lies

with the state government for making the minimum infrastructure available for networking.

TABLE 2. STATUS OF KEY AREAS OF REFORMS CONSIDERED ESSENTIAL FOR IMPLEMENTATION OF NATIONAL AGRICULTURAL MARKET (DECEMBER 2015)

States/UTs (1)	e-trading (2)	Single point levy of market fee (3)	Unified license system (4)
Andhra Pradesh	√	√	√
Arunachal Pradesh	x	x	x
Assam	x	x	x
Bihar	x	x	x
Chhattisgarh	√	√	√
Goa	√	√	√
Gujarat	√	√	√
Haryana	√	x	√
Himachal Pradesh	√	√	√
Jammu and Kashmir	x	x	x
Jharkhand	√	x	x
Karnataka	√	√	√
Kerala	x	x	x
Madhya Pradesh	√	√	√
Maharashtra	√	√	√
Manipur	x	x	x
Meghalaya	x	x	x
Mizoram	√	√	√
Nagaland	x	√	√
Odisha	x	x	x
Punjab	x	√	√
Rajasthan	√	√	√
Sikkim	√	√	√
Tamil Nadu	x	x	x
Telangana	√	√	√
Tripura	x	x	x
Uttar Pradesh	x	x	x
Uttarakhand	√	√	x
West Bengal	x	x	x
UT of Chandigarh	x	√	x

Source: DMI (2015).

TABLE 3. INFRASTRUCTURE SUGGESTED FOR NETWORKING OF WHOLESALE MARKETS WITH NATIONAL E-PORTAL

Point of intervention (1)	Infrastructure/support (2)	Number (3)
Entry/Exit	Computer/ Laptops and Printers	1 + 1
Weighment	Electronic Weighbridge	1
Auction hall	Computers and Internet	6
Generation of sale bills/Anugya/ other documents	Computers and Printers	1
Display facilities	Screens/ projectors	As per Need
Connectivity with NAM portal	Broadband connection	4 mbps
Backup	Alternate source of internet	--
Power conditioning (UPS)	1 KV and 5 KV	1 and 2
Assaying Lab	Civil infrastructure and Lab equipments	1 1
Human Resource	Mandi Analyst (IT Person), onsite resources and lab operator	6

TABLE 4. BASIC INFRASTRUCTURE AVAILABLE IN THE SAMPLE STATES

States (1)	<i>(per cent of wholesale market)</i>							
	Information notice (2)	Public notice board (3)	Auction platform (4)	Bank (5)	Public address system (6)	Grading lab (7)	Mechanical Grader (8)	*Accredited warehouse (9)
Gujarat	65	59	65	32	2	29	9	138
Haryana	86	73	82	55	1	9	5	21
Himachal Pradesh	67	69	82	81	34	1	1	0
Jharkhand	36	52	62	58	21	1	0	1
Madhya Pradesh	65	62	59	21	12	3	0	233
Rajasthan	81	79	73	49	17	1	1	163
Telangana [#]	83	71	87	27	19	6	7	43
Uttar Pradesh	53	61	76	82	29	3	0	24

Source: IFPRI 2016 and (*) in number from WDRA, 2016.

[#]Figures have been worked out on the area distribution for undivided Andhra Pradesh.

(iii) *Grades and Standards*

The integration of markets, participation of large number of buyers, online settlement, clearance facilities through warehouses, expansion of commodity and pledge financing, etc will be possible when trade will take place on the basis of grades. Developing uniform trade accepted grade and standards across all the member states is going to be a big challenge.

(iv) *Assaying Lab and Skilled Manpower*

In order to participate in e-trading, commodities are required to be converted from physical form to electronic form. This will need, assaying labs and skilled manpower for conversion of same. At present the availability of such labs as well as skilled personnel are meager. The facilities are also found to be quite poor as in all the participating states except Gujarat the availability of assaying labs have not reached even ten per cent level.

(v) *Participation of Farmers*

The integration of farmers with the system may be enhanced by aggregating producer and production. In spite of the numerous initiatives of the government to bring farmers together; it is going to be challenging to organise such a large size of smallholders operating across the country. Educating them on various aspects of the concept is also going to be vital so that they can available to them under NAM.

(vi) *Constraints*

An attempt has been made to enlist the constraints presently being faced by different stakeholders in implementing the scheme. These can be broadly classified into following groups:

(i) General constraints	<ol style="list-style-type: none"> (1) Lack of awareness about e-trading among stakeholders (2) Acceptance of e-platform by market participants (3) Trust and reliability of stakeholders on e-platform (4) Absence of proper training and education of key stakeholders (5) Lack of integration for post bidding facilities like logistic, storage etc. (6) Credit facility to traders (7) Lack of understating of role and responsibility by Secretary/APMC staff (8) Traditionally existing business relations may discourage electronic trade (9) Cumbersome mechanism for dispute redresser
(ii) Online platform and settlements	<ol style="list-style-type: none"> (1) Issues with the electronic platform developed by private player and frequent technical glitches (2) Availability of electronic infrastructure and its maintenance and un-interrupted power supply (3) Inability of traders to deposit amount on time (4) Timely transfer of amount to farmers accounts (5) Apathy of commission agents for on-line payment (6) Vetting of procedure by key stakeholders like traders (7) Uploading Information on trading platform
(iii) Unified license for trade	<ol style="list-style-type: none"> (1) Traders are scared of competition and hence do not cooperate (2) Difficulty in logistics for outside traders (3) Lack of assaying facility to encourage outside traders to participate in bidding on the platform
(iv) Difficulties in the process of registration	<ol style="list-style-type: none"> (1) Lack of cooperation from producer-growers (2) Reluctance of farmers to provide required details (3) Non-availability of required identity proofs/documents with producer-growers (4) Distrust among the farmers over the new technology based system (5) Lack of awareness on benefits of NAM among farmers (6) Lack of trained Staff (7) Registration becoming difficult in the system dominated by aggregators and commission agents working on behalf of farmers
(v) Assaying of commodities require	<ol style="list-style-type: none"> (1) Absence of assaying facilities (2) Unavailability of skilled assayer (3) Lack of definition on method of sample collection, time required for completion of sample analysis, details on charges and accreditation of the lab/procedure

Source: Field survey.

IV

WAY FORWARD FOR SUCCESSFUL IMPLEMENTATION

The concept of National Agricultural Market has the potential to encourage integrated value chains, bring in transparency, competitiveness, efficiency, reducing transaction cost, price stabilisation, quick realisation by the farmers and to help evolve a system at national level having integrated different service providers. In order to realise potential benefits and to take it way forward, there is need for a more focused and balanced approach having participation from all the states/UTs having wide coverage of commodities. The

implementation of the scheme with participation from all the states will encourage balanced development of agriculture as well as harmonisation of legislative measures.

The national market speaks of integrating different service providers like warehousing and logistics, banking and insurance and MIS but lacks immensely in defining and providing details guidelines for each of the services. There is immediate need to evolve detailed guidelines along with their roles, responsibility, charges and mechanism to address the disputes.

In order to enhance the clarity amongst different stakeholders on their role and responsibility, there is a strong need to develop a time bound strategy covering publicity, awareness and capacity building of different stakeholders with a focused approach for producer-growers to avoid any possibility of their exclusion of farmers from the system.

The provision for assistance from the central government to improve the status of infrastructure in participating wholesale markets should be linked to the scale of operation of trade in the market to make it more fruitful. There is need for getting more and more warehouses registered under WDRA for their true integration with national agricultural market.

At present only twelve states are ready in terms of provision for reforms required by NAM, the rest of states need to be encouraged to undergo agricultural marketing reforms to facilitate their participation and make the implementation of NAM truly possible.

The implementation of the concept in the light of above suggestions along with a mechanism for monitoring, supervision and evaluation by the third party with no conflict of interest with the implementing agencies may help emerge the national agricultural market as a real game changer for Indian agriculture.

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