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Evolution of E-NAM in India: Prospect for farmer's growth and prosperity

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Abstract

India's agricultural products can be traded online via e-NAM. The market enables farmers, merchants, and buyers to trade commodities online. The goal of the National Agriculture Market (e-NAM), an electronic trading platform, is to establish a uniform national agricultural commodities market. It operates by establishing connections between India's current Agricultural Produce Market Committee (APMC) mandis. With full backing from the Central Government, the Ministry of Agriculture and Farmers' Welfare oversaw the Small Farmers Agribusiness Consortium (SFAC), which carried out the implementation of e-NAM, which was unveiled on April 14, 2016. With an online payment method and an internet-based system that guarantees fair and transparent price discovery, the e-NAM system gives farmers better marketing chances to sell their agricultural products. The market promotes better price discovery and the effective sale of commodities. With an online payment method and an internet-based system that guarantees fair and transparent price discovery, the e-NAM system gives farmers better marketing chances to sell their agricultural products. The market promotes better price discovery and the effective sale of commodities.

Keywords: e-NAM, APMC, mandis, online payment

Introduction

The agriculture sector is a significant part of the Indian economy, accounting for about 17% of GDP (Gross Domestic Product) and employing around 60% of the population (Aggarwal *et al*., 2016) [5]. Food grain demand increased from 51 million tonnes in 1950-51 to 297 million tonnes in 2019-20 (IBEF, 2021). Despite being one of the world's leading producers of agricultural commodities, farmers in India deal with unclear selling opportunities, inadequate infrastructure, transportation issues, and middlemen's meddling (Saxena *et al*., 2017) [6].The Indian governments have paid more attention on improving coverage of irrigated land, increasing financial capabilities of farmers, reducing financial risk through Minimum Support Prices (MSPs), enhancing soil quality, mechanizing the harvesting process and increasing the storage capacities. But there has been paid less attention on improving the post-harvest infrastructure of agricultural marketing that directly impacts the income realization and living standard of farmers-producers (G. L. Meena *et al*., (2019) [9]. The Electronic National Agricultural Market (e-NAM) system was launched in 2016 as part of the Digital India flagship program to allow farmers and traders to sell their crops online throughout India (Chand, 2016) [4]. National Agriculture Market (e-NAM), a pan-Indian electronic trading network, would link the current APMC marketplaces to create a nationwide market for agricultural commodities. the Agricultural Produce Market Committee (APMC) is connected to a wide range of information and services through the e-NAM platform, which acts as a single point of contact for all pertinent requirements. (Arijit Karmakar *et al*., 2023) [10]. In addition to offering useful information on commodity arrivals, prices, trade offers for buying and selling, responsiveness to trade offers, payment settlements, and grievance resolution, the APMC marketplaces promote the transportation of agricultural produce. The Internet market reduces the information and transaction cost imbalance. By isolating the actual movement of commodities from commercial activities using warehouse receipts and grades, e-NAM has gradually aimed to reduce transaction costs. (Coulter & Onumah, 2002) [1]. Economic beneficiaries' opinions and reactions can be used to assess the worth and efficacy of any e-NAM (Badodiya *et al*., 2010) [3]. e-NAM for agricultural marketing is a technology that will transform markets on a social level. The use of technology-enabled e-NAM in agricultural markets will bring about a social shift in the networks and interactions that exist between buyers and sellers as they do in traditional markets. (Swapnil Gupta Prof. P. S. Badal 2018) [8].

Objectives

- To facilitate trade in agricultural commodities throughout India, marketplaces will be integrated initially at the state level and then nationally via a unified online marketplace.

- To support the effective operation of the markets by streamlining marketing and transaction processes and standardizing them across all markets.
- Better and real-time price discovery based on actual demand and supply of agricultural commodities, transparency in the auction process, prices commensurate with produce
- Traders are all ways to encourage better marketing opportunities for farmers and sellers.
- To set up quality assaying methods for quality control in order to encourage buyers to place well-informed bids.
- To encourage consumers to purchase high-quality products at consistent rates.

Features of the Scheme

According to Arijit Karmakar *et al*. (2023) [10] e-NAM has following features:

In a variety of marketplaces, including kisan mandis, warehouses, and private markets, the national e-market platform, or e-NAM, enables fair transactions, price discovery, and regulated trading. States must express their readiness to participate by including an e-trading clause in their Agricultural Produce Market Committee (APMC) Act. For the purchase of related hardware, including quality assurance tools, and for the improvement of infrastructure, including the construction of facilities for maintenance, grading, sorting, packing, and composting, the government is offering free software and financial assistance SSof Rs. 75.00 Lakh per mandi. Digital media is increasingly being used to promote food and agriculture in emerging economies.

India is likewise affected by this. The Ministry of Agriculture and Farmer Welfare launched a mobile application for the (e-NAM)-Platform of Platforms (PoP) in 12 different languages on July 14, 2022. Trading, assaying, shipping, storage, financial services, agri-advisory/extension services, market data, institutional buying and selling, and services pertaining to agricultural inputs are just a few of the services that are included in the PoP dashboard.

The agricultural market has gone through a gradual progression, starting with the implementation of e-NAM 1.0 as a first step towards e-NAM 2.0. The latter aims to facilitate warehouse-receipt (e-NWR) trade and direct marketing of farmer products through the APLM Act, 2017. Additionally, the PoP app-based module is expected to be included in e-NAM 3.0. The agriculture sector has not yet been significantly impacted by the inclusion of the remaining APMCs (MoAFW, 2021).

Pre-requisites for e-NAM

There are three basic criteria for a state to propose Mandis for e-NAM

- A particular clause allowing for electronic trading and e-auction as a method of price discovery must be included in the state APMC Act.
- There must be one single trading license to be valid across the state/UT
- A single point levy of market fee across the State/UT.

Beneficiaries & Benefits of the Scheme

All parties involved—farmers, mandis, merchants, buyers, processors, and exporters—stand to gain from the design and implementation of e-NAM. Among the advantages for stakeholders are:

G. L. Meena *et al* (2019) [9] conclude the following benefits of e-NAM:

Benefits of e-NAM for farmers

- Trade transparency
- Improved price discovery
- Expanded market reach
- Fast payment
- Real-time pricing information in surrounding mandies
- Capable of creating a sound financial condition

Benefits of e-NAM for traders

- Access to a single integrated National Agri Market,
- Extended access to additional markets, and
- Real-time data on trade and arrivals in the integrated market
  Online banking and payment capabilities
- Simplicity of conducting business via mobile applications
- Access to data regarding commodity quality

Benefits of e-NAM for mandies

- Integration of systems and automation of transaction recording
- Comprehensive trade data
- Real-time arrival tracking
- Analysis of pricing patterns, arrivals, and trading activity
- Automated financial data recording

Background and status of e-Nam in India

The government promoted the development of a sufficient number of marketplaces with contemporary infrastructure in order to keep up with the shifting production patterns and increasing marketable surplus. The government underlined the necessity of expanding the involvement of the private sector and creating alternate marketing avenues, such as contract farming and direct marketing. It was said that in order to create an appropriate legal framework and policy environment for such advances, the government is actively working with States to reform their marketing laws. According to reports, the government's reform strategy focuses on seven crucial sectors, with state-by-state variations in progress. Furthermore, as part of the reforms, the government announced a scheme for the establishment of the National Agriculture Market (NAM). Under NAM, it was planned to deploy a common e-market platform for online trading across states and the country. It was expected that NAM would address the marketing constraints related to fragmentation, lack of transparency in bidding, poor price discovery, and information asymmetry between sellers and buyers. It was said that the goal of NAM was to increase farmers' overall welfare and provide them a bigger portion of the consumer rupee. (Indian Government Press Information Bureau, 2016). The electronic trade gateway for the national agricultural market, or e-NAM, is a project driven by modern technology to transform the agricultural

marketing system. It serves as a platform that links e-mandis online in an effort to improve agricultural marketing and give farmers access to higher pricing for their produce. On April 16, 2016, 24 commodities were piloted for trading across 21 mandis in 8 states on the e-NAM platform.

Break up of Stakeholders in e-Nam

Total number as 30th November 2024: 1,82,26,691

State	27
Traders	2,62,754
Commission Agents (CAs)	1,14,612
Service Provider	79
FPOs	4,289
Farmer	1,78,44,957
Total	1,82,26,691

Source: www.enam.gov.in

Commodities traded under e-NAM

Commodity Category	No. of Commodities
Cereals	33
Oilseeds	14
Fruits	43
Vegetables	57
Spices	16
Misc	46
Total	209

Source: www.enam.gov.in

Workflow of online trading in APMC with e-NAM

G. L. Meena *et al*. (2019) [9] summarize that From gate access to market exit, agricultural commodities transported to the Market Yard (Mandi) go through a number of steps. The various steps in this process involve the seller or farmer registering the vehicle and transporting the product to the Mandi for sale via e-NAM. The commodity weigh-in, either lot-wise or vehicle-wise, comes after this activity. For quality assaying, a sample is taken. The auction procedure and associated activities come after this action. The buyer takes the commodity to the post-trade exit if the auction is successful, while the farmer or vendor leaves Mandai with the commodity if it is not sold. The following is the APMC trading workflow for farmers/sellers, traders/buyers, commission agents, and mandi users.

Workflow of trading in APMC – Farmers/Sellers

Step1: Entry gate	To register vehicle in which crop / sale product is brought in Mandi Quick registration of farmers'
Step 2: Weighment	Seller has to get his vehicle or product weighment done
Step 3: Quality assaying	Seller has to get quality check of his produce or product brought into Mandi
Step 4: e-Auction	Seller has to participate in e-Auction to sell his products/crops Seller has to lead to exit gate after settlement, if not interested in sale.
Step 5: Exit gate	Seller after trade settlement has to exit with post trade slip If product / crop not sold, seller has to exit mandi gate with own¬ produce slip

Workflow of online trading in APMC – Traders/buyers

Step1: e-NAM registration	Trader/buyer has to register in the e-NAM portal After registration login into e-NAM portal¬
Step 2: Trading/ bidding	Trader/buyer can check the commodities /crops for bidding in the new bid listing page Select the desired commodity and start bid process Trader can see details of commodity market amount, last & previous bid amount Trader can enter amount in new bid column to bid
Step 3: Other options for buyer in e-NAM	Can view trade history Can view security/margin deposit details and pending amount against invoices raised details

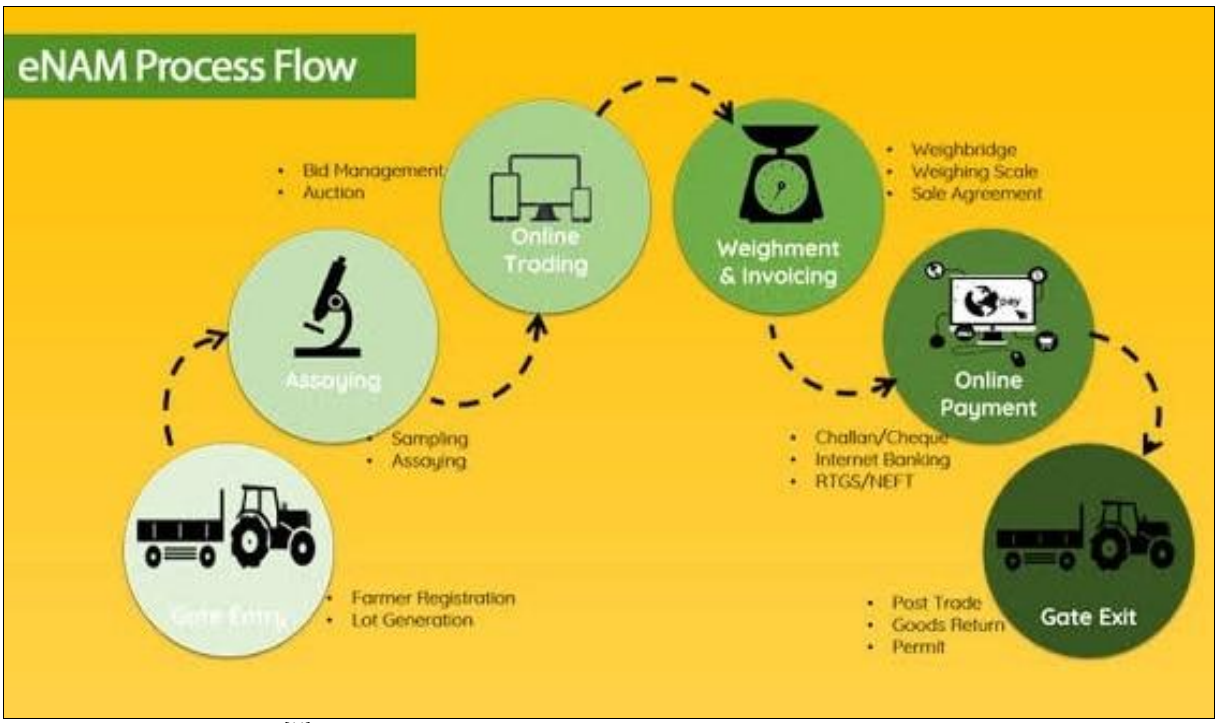
Workflow of online trading in APMC – Commission Agent (CA)

Step1: e NAM registration	CA has to register in the e-NAM portal, After registration login into e-NAM portal
Step 2: Lot consent	CA here can view list of lots and current and pending consent
Step3: Dashboard	CA on his login dashboard can view arrivals of different commodities along with weighment and bid rate details

Workflow of online trading in APMC – APMC/Mandi user

Step1: Entry Gate	APMC user has to register buyer / seller vehicle registration, Do farmer' registration
Step 2: Weighment	Weighment has to be done lot-wise or vehicle wise
Step 3: Quality Assaying	User has to create sample of the commodity / crop for quality assaying After assaying, enter the quality test results
Step 4: e-Auction	APMC user has to do following steps in the e-auction process (i) Lot management (ii) Approval of trade creation (iii) Bid submission (iv) Bid declaration (v) Sale agreement (vi) Invoice generation (viii) Sale settlement
Step 5: Exit gate	Seller after trade settlement has to exit with post trade slip If product / crop not sold, seller has to exit mandi gate with goods return slip

Process of e-NAM



Source: Wadhwa, L. (2018) [11]. eNAM: A Step Towards Doubling Farmers' Income By 2022. The Management Accountant Journal, 53(8), 52-61.

Challenges for e-NAM

- e-NAM, which was envisioned as a unified national electronics agriculture market, faces multiple hurdles.
- To put it into effect, each state must first alter its APMC Act to allow for a single license throughout the state, have market fees collected at a single location, and include provisions for electronic auctions as a method of price discovery.
- No state has a fully operational platform. There are no equipment for quality testing or scientific facilities for sorting and grading. Another problem preventing advancement is a lack of internet connectivity.
- Convincing farmers, traders, and commission agents to switch to the online platform has proven to be a challenge for state agriculture ministries. Farmers dread reduced pricing if the produce is analyzed, while traders fear the tax collector.
- The establishment of facilities for grading and assaying has also been hampered by the State Agricultural Departments' lack of technical know-how.
- A significant disadvantage of e-NAM is that a trustworthy method of evaluating the quality of the produce is required in order for a trader to bid from a different location. Most dealers prefer and trust visual assessment by their own agents because it is impossible to assay every arrival.
- Until they have the items, traders are also hesitant to guarantee instant online payment. In the past, commission agents took on these risks by paying farmers and receiving payment from traders following delivery.
- Because of their vital function in assaying, credit, and storage, intermediates are preferred by both farmers and traders.

Outcomes of e-NAM

Arijit Karmakar *et al*. (2023) [10] conclude the following outcomes of e-NAM

- By using e-NAM, market connectivity has enhanced as a result of the integration of 1000 markets across 18 States and three Union Territories.
- The e-NAM platform has witnessed registration of over 1.69 crore farmers and 1.55 lakh dealers.
- A total of 4.13 crore MT of bulk commodities and 3.68 crore coconut and bamboo transactions have been recorded on the e-NAM platform, with an estimated value of around Rs 1.22 lakh crore.
- A total of 3.773 million farmers sold their produce on the National Agriculture Market (e-NAM) platform during the fiscal year 2020–21. Similarly, 0.878 million farmers used the e-NAM platform to market their agricultural yields as of June 30, 2021, during the fiscal year 2021–2022.
- Paddy, wheat, cotton, chilli, soybeans, maize, potato, chana, tomato, groundnut, mustard seeds, gaur seeds, onion, turmeric, arhar (tur/red gram), bajra, moong whole (green gram), castor seed, lentil (masur), and sweet lemon are among the main agricultural products that farmers exchange on the e-NAM platform.
- The technology has facilitated the implementation of direct payment to farmers.
- Both English and eleven Indian languages—Hindi, Bengali, Marathi, Gujarati, Tamil, Telugu, Punjabi, Odiya, Dogri, Malayalam, and Kannada—are now available on the e-NAM web. The purpose of this clause is to allow farmers to use the e-NAM platform in the language of their choice.
- The Farmer Producer Organization (FPO) trading module was just added to the National Agriculture

Market (e-NAM) platform. By removing the requirement to transport the items to the Agricultural produce Market Committee (APMC) markets, this module seeks to empower FPOs to trade their agricultural produce directly from nearby collecting centers. Farmers can now sell their agricultural products from warehouses that are registered with the Warehousing Development and Regulatory Authority (WDRA) and designated as recognized marketplaces thanks to the introduction of a trading module focused on warehouses on the e-NAM platform.

Conclusion

An important step in bolstering the agricultural marketing industry and raising farmer incomes is the creation of e-NAM. Once e-NAM is completely operational nationwide, farmers will be able to use it, which will facilitate faster transactions and make online payment gateways user-friendly. Integrating every mandi in the nation, establishing assaying labs in each mandi, offering logistics and other support systems for inter-mandi and inter-state trade, increasing market participants' capacity, building infrastructure and institutional facilities, and encouraging farmers to engage in more e-trading on e-NAM are the main challenges facing the Indian government. When e-NAM is completely operational across the nation and makes online payment gateways simpler to facilitate speedier transfers, farmers will be able to fully benefit from it.

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