

A Review Paper on Electronic Trading Portal: National Agriculture Market (e-NAM)

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Abstract

The Agricultural Produce Marketing Committee (APMC) runs the wholesale market for agricultural products in the majority of the states and provinces of India. Agriculture marketing is crucial to the expansion and development of farming and agricultural outputs, which are vital to India's rural development. Today in India, the 'brick and click' market version of Mandi system is being adopted. The Indian government then launched pan-India electronic trading under e-NAM portal. The electronic trading portal was launched on 14th April, 2016 by the Prime Minister Shri Narendra Modi to link the prevailing mandis on a shared online market platform. The main aim of the platform is to endorse uniformity in agriculture marketing and eliminate information unevenness in the market. This digital initiative of Indian government has offered a single window service for all APMC linked evidence and services, like inflow of the commodity, quality testing, competitive bid proposals and electronic payment clearance directly into farmers' account. The introduction of e-NAM has benefitted in various ways like translucent online trading, improved price realization for farmers, diminished transaction cost for buyers, steady prices, more proficient supply chain, and payment and delivery guarantee. e-NAM has strengthened One Nation One Market goal, encouraging farmers, traders, and mandis to cooperatively work together as a unified group to take nation towards virtual sale and purchase of agri-produce.

Keywords: Agriculture, agricultural marketing, e-NAM

Introduction

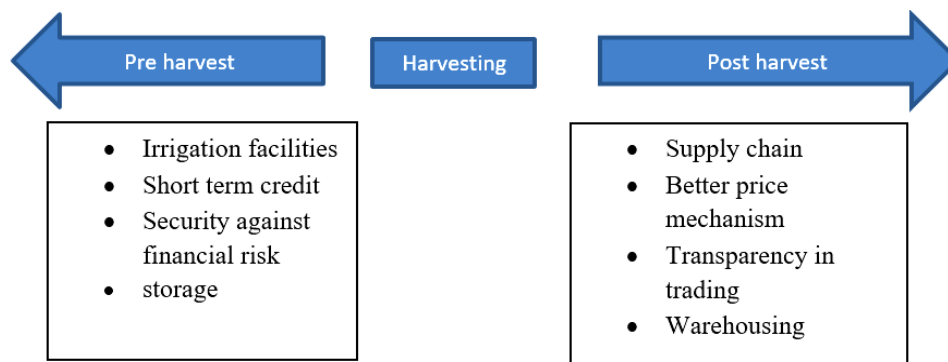
"Agriculture needed topmost priority because the government and the nation would both fail to succeed if agriculture could not be successful."

Jawaharlal Nehru

Agricultural Sector in India

In the development of human civilisation, agriculture has been a turning point. Men settled in specific locations as a result of agriculture. Agriculture is one of humankind's most fundamental and ancient pursuits. Despite the world's increasing industrialisation and urbanisation, agriculture still employs approximately 50% of the working population. Agriculture has historically been a significant source of employment and economic contribution in developing

nations. Alike other developing countries agriculture is the primary source of livelihood in India also. It is estimated that Agriculture and allied activities share is around 15% of country's economy but for 42 percent of total employment. Gross Value Added by agriculture, forestry and fishing is estimated at Rs18.53 trillion in FY 2018 (IAAIR, 2019). The Latin words "Ager" and "culture," which imply "land or field" and "cultivation," respectively, were combined to form the English word "agriculture." Agriculture is generally understood to be the science and practise of raising animals and crops for economic gain. This encompasses all aspects of the production, processing, marketing, distribution, consumption, and exchange of food, feed, and fibre. The government frames different developmental strategies and provides various benefits for both these periods (as shown in figure) in order to boost the agricultural productivity.



Source: Self-framed

Fig 1: Pre and post-harvest activities

In the past, subsistence agriculture was practised in India; the communities were self-sufficient, and people traded products and services on a barter system inside the community. Agriculture has taken on a more commercial nature as a result of the growth of transportation and storage infrastructure; farmers now plant commodities that sell for more money. Since marketing encourages an agriculturist to boost investment and production, it is thought of as a crucial component of agriculture. Consequently, there is a growing understanding that producing a crop or animal product is not enough; it also needs to be marketed. In the past, farmers would only sell a tiny portion of their harvest in order to cover their bills, rent, and other obligations. Since there were no storage facilities, such sales were typically made as soon as the products were harvested. Farmers sold a sizeable portion of their overall crop to local merchants and moneylenders, frequently at prices that were much below market rates.

Role of Agriculture in Indian Economy

Agriculture have played a prominent role in Indian economy since ever. It contributes to every known economic parameter: a significant share in national income, provides livelihood to majority of population, major share in food supply, supplies raw material to industrial sector, play an important role in internal and external trade and also come up with substantial income to government.

This above mentioned statement can be supported by latest statistical facts provided by many governmental and non-governmental sources.

• Contribution of Agriculture towards National Income

The following table shows the contribution of agriculture and related sectors to the Gross Value Added (GVA) of the nation over the previous three years, at current prices, according to the Provisional Estimates of Annual of National Income released by the National Statistical Office (NSO), Ministry of Statistics and Program implementation on May 31, 2021.

Table 1: Share of GVA of agriculture and allied sector.

Year	Percentage share of GVA of agriculture and allied sector to total economy
2018-19	17.6
2019-20	18.4
2020-21	20.2

Source: National Statistical Office (NSO), Ministry of Statistics and Program Implementation.

Table 1 shows the contribution of the agricultural and related industries to Gross Capital Formation (GCF) at current prices for the previous three years, according to the First updated Estimates of National Income provided by NSO on January 29, 2021.

• Employment in Agricultural Sector

Agriculture is the primary source of livelihood for Indian population. Agricultural sector has the highest number of employees that amounted to nearly 152 million in FY2021. Despite the corona pandemic impact on GDP, agricultural sector has shown upward trend in employment by 5.91 million employees. as of 2019, 42% of population is engaged in agriculture while remaining population is evenly distributed among industrial and service sector. This share is continuously declining since last decade but it is still main source of livelihood.

Table 2: GCF of agriculture, forestry, and fishing.

Year	GCF of Agricultural, forestry and fishing at current price (in crores)
2018-19	3,62,706
2019-20	4,07,842
2020-21	4,46,044

Source: National Statistical Office (NSO), Ministry of Statistics and Program Implementation.

• Share in Food Supply

Many developing countries have been facing problems of hunger, food insecurity and undernutrition. But India is among one of the several countries which have achieved grain self-sufficiency. According to Economic Survey 2020-2021, In FY20, the nation produced 296.65 million tonnes of food grains collectively. In FY21, it was up by 6.69 million tonnes, recorded at 303.34 million tonnes. In addition, Indian industry has enormous growth potential, growing its share in global food commerce every year as a result of its enormous advantage in value addition.

Role in Internal and External Sector

India has propelled as a key supplier of food products to the world market. In last 15 years, India's imports increased by 8 times and exports increased by 7 times. There has been a considerable trade surplus in agricultural commodities over the years.

Global exports of agricultural and related products totaled US\$41.25 billion in FY 2021. India is one of the top 15 exporters of agricultural goods worldwide.

Table 3: Agricultural export.

Year	Exports (in crores)
2019-20	2.27 lakh
2020-21	2.69 lakh

The Agricultural Export policy approved by the Government of India in December 2018 aimed to increase agricultural exports to \$60 billion by 2022 and touch the milestone of \$100 billion in coming few years. (Export policy).

Besides exports, import of agricultural and allied commodities have also increased.

Table 4: Agricultural imports.

Year	Imports(in crores)
2019-20	1.51 lakh
2020-21	1.44 lakh
2021-22	

Agricultural Marketing in India

Agriculture marketing is crucial to the expansion and development of farming and agricultural outputs, which are vital to India's rural development. The vital connection between agricultural production and the non-agricultural, industrial, and urban economies is the marketing system. Prof. Faruque provided a generally accepted definition of agricultural marketing, stating that "Agricultural Marketing covers all processes involved in the flow of farm products from the producer to the ultimate consumer." Therefore, agricultural marketing include activities including gathering, sorting, processing, conserving, moving, and financing. "Study of all such operations related to agricultural production and the agencies conducting them in the

movement of farm produced goods or agricultural produces from the farms to the final consumers and the effects of such operations on farmers, middlemen, agents and all those who are concerned with it," defined by Thomson.

Different organised and unorganised systems of agricultural marketing prevalent in India are as follows:-

- **Sale in Weekly Village Markets**

The majority of rural primary markets are the periodic markets, often referred to as haats, shandies, painths, and fairs, which are thought to number between 21,000 and 47,000 nationwide. Despite the growth of permanent shops, these nevertheless contribute significantly to the rural economy. They are the world's oldest trading institutions. These marketplaces give people the chance to sell excess agricultural and related produce in addition to buying consumer goods. Direct sales to customers or small rural stores are the two ways that growers sell their produce. The amounts transacted are small, and the goods are typically of lower quality. These markets are typically held once a week and are mainly uncontrolled. These are situated in rural and interior areas and act as focal points for the vast majority of farmers, the majority of whom are small and marginal farmers, for the selling and acquisition of their farm products for consumption needs.

- **Sale to Village Moneylenders and Traders**

In one way or another, nearly every farmer in India is held captive by the lucrative illegal moneylending industry. Families have lost their land, farmers have been forced to sell their spouses as prostitutes to pay off debts, and when all else fails, debtors have committed suicide to end their suffering. "Moneylenders are now an integral element of the rural economy, to the point that a small farmer no longer needs a bank." Moneylenders have been present for years, but their sector has exploded since since the nation's economic interests changed from agricultural to industry as a result of globalisation. The introduction of expensive crops and herbicides has increased the debts. Indeed, in a line of work where the dangers are already considerable, a few crop failures, an unexpected medical bill, or a family marriage have become that much more risky. According to official statistics, about half of India's 100 million farming families are in debt. Farmers' lobby groups claim that a much greater percentage-more than 30% of these borrowings are owed to private moneylenders.

- **Cooperative Marketing Societies**

Cooperative marketing is an extension of the philosophy and principles of cooperation in the area of agricultural marketing. It is a process of marketing through which a cooperative society is formed voluntarily for the producers, by the producers, to perform one or more marketing functions in respect of their produce and seeks to eliminate the middlemen between the producers and consumers, thus getting the reasonable and maximum price for their produce. Margaret Digby (1957) defined cooperative marketing as, "the system by which a group of farmers or market gardeners join to carry on some or all the process involved in bringing goods from producer to the consumer".

In India, the modern cooperative movement has been introduced by passing of Cooperative Credit Societies Act of 1904, with the chief object of relieving the poor peasants from the clutches of traditional money lenders. When compared to cooperative credit, cooperative marketing in India is of latest origin. Since the 1904 Act was confined only to the

organization of credit societies, there was no provision for starting cooperatives other than credit (non-credit cooperatives). Identified this as a drawback, the Government of India enacted another new Act, Cooperative Societies Act in 1912, which paved a way for organizing other types of cooperative societies, including marketing cooperatives. Only in the year 1915, Maclagon Committee recommended for the establishment of non-credit societies. In the early period of its development the objectives of marketing cooperatives were simple and restricted to the sole activity of produce and provided advances against pledge of produce. The first marketing cooperative was organized at Hubli in the former Bombay Province in 1915 and subsequently another one at Godag in 1917. The chief objective of both the societies was to persuade the cultivation of improved cotton introduced by the Agricultural Department and to sell it collectively. Since then the number of societies has steadily increased. Further the importance, progress, growth and development of cooperatives was realized drastically during the Five Year Plan Periods. The structure of cooperative marketing is not uniform in all states. Some states follow two tier structures, while others follow three tier structures. Under the two tier structure of cooperative marketing, primary marketing societies are established at mandi/secondary market levels and the apex marketing societies at the state level. The primary marketing societies at the mandi/secondary market levels, the central marketing societies at the district level, and the apex marketing society at the state level are what make up the three-tier cooperative marketing structure.

- **Selling of Surplus Produce in Mandis Located in Various Small and Large Towns**

Mandi in Hindi language means market place. Such markets typically sold food and agricultural supplies. However, as time went on, the scope of mandis grew to encompass trading centres for nearly all tradables, such as grains, vegetables, lumber, jewels, and diamonds. Fairs are frequently held at mandis for animals such cattle, goats, horses, mules, camels, buffaloes, and poultry. As a result, the word "mandi" takes on the characteristics of a market place where anything can be bought or sold. Mandis are a vital component of India's infrastructure, which is still largely rural. The Agricultural Produce Marketing Committee (APMC) runs the wholesale market for agricultural products in the majority of the states and provinces of India. According to the type of item handled, wholesale markets are divided into sections, such as those for grains, pulses, vegetables, potatoes, and onions, spices and condiments, and fruits. The APMC Rules have been relaxed in response to rising dissatisfaction with how APMCs operate, and direct marketing for agricultural commodities is now a common practise. Farmers markets are a common name for these. These markets give farmers the opportunity to sell their goods directly to customers instead of going through APMC intermediaries. Government policy objectives to reduce intermediation and develop a national common market have long been treasured.

Evolution of Agricultural Marketing Regulations

The Agricultural Produce Marketing Committee (APMC) runs the wholesale market for agricultural products in the majority of the states and provinces of India. According to the type of item handled, wholesale markets are divided into sections, such as those for grains, pulses, vegetables, potatoes, and onions, spices and condiments, and fruits. The APMC Rules have been relaxed in response to rising dissatisfaction

with how APMCs operate, and direct marketing for agricultural commodities is now a common practise. Farmers markets are a common name for these. These markets give farmers the opportunity to sell their goods directly to customers instead of going through APMC intermediaries. Government policy objectives to reduce intermediation and develop a national common market have long been treasured. This Act served as a template for legislation that was passed across the nation. The Royal Commission on Agriculture's 1928 recommendation to regulate marketing techniques and create regulated markets marked a significant turning point in the nation's agricultural marketing landscape. Regulation of business operations and the establishment of market yards in rural areas were among the actions done to address the issue.

The Commission held that prosperity of cultivator and his progress in agricultural efficiency depends on sound marketing. For this purpose, the office of Agriculture Marketing Advisor was set up. Along with it, Agriculture Produce (Grading and Marking) Act, 1933 was passed in order to address the problem of adulteration and unfair competition. Grading stations were established at different places. In order to address the question of efficiency in production various steps were taken like reduction in cost of production, minimizing wastage, freight and packaging expenses. It was assessed that establishment of properly regulated markets under statutory control will lead to a reduction in market charges and elimination of 'Phatka' markets and well conducted 'futures' trading will reduce price risk (*A. Mcd. Livingstone*).

In order to do this, the Indian government created a Model Bill in 1938 and distributed it to all the States, but little progress was made until independence. Later, in the 1960s and 1970s, the majority of States passed and implemented Agricultural Produce Markets Regulation (APMR) Acts. With the passage of these Acts, all major wholesale assembly marketplaces came within their purview. A well-designed market yard and sub-yard were built, and an Agricultural Produce Market Committee (APMC) was established for each market area to establish and uphold the rules. So, through controlled marketplaces, organised agricultural marketing was created.

Through a network of regulated markets, organised sale of agricultural goods is being pushed throughout the nation. The primary goal of developing a network of physical markets has been to ensuring that farmers receive a fair return by fostering an environment in which supply and demand forces can operate fairly, regulating market practises, and achieving transaction transparency. The number of regulated marketplaces in the nation has grown in response to the requirement to manage rising agricultural production. There were just 286 regulated markets in the nation at the end of 1950; today, there are roughly 8500. These regulated markets are wholesale markets.

Agriculture markets play a vital role in facilitating the smooth functioning of agricultural activities and keep a check on any type of fraudulent activities causing a loss to producers and consumers. The role of agricultural markets was limited to these functions only till 1960's. After this, the country opted for a policy framework for interventions in agriculture markets and prices which could be placed into three categories-

- Regulatory measures
- Market infrastructure
- Agriculture price policy

Two sets of regulatory measures were incorporated. One concerned the creation and management of wholesale markets, and the other, the use of legal tools to control the markets. The adoption of marketing laws, also referred to as Agricultural Produce Marketing Committee (APMC) acts, is one such regulation. For the sale of farmers' produce, these marketplaces need to maintain a solid infrastructure. Through an open auction held in front of a representative of the market committee, prices must be determined in a transparent manner.

Over the period of time, this act has become restrictive in nature and has prevented the entry of new competitors and therefore reducing competition (Acharya, 2001). Therefore, the state governments could adopt the Model Act created by the Union Ministry of Agriculture in 2003 to change their Acts (agricultural marketing is a state subject). The Model Act permits the establishment of markets by the private sector and cooperatives. Additionally, it permits private traders to engage in direct marketing and contract farming. But with the passage of time, the marketing system was affected by inefficiencies, bureaucratic control and political influences which forced the producers to take the help of intermediaries. This worsened the situations of farmers as they became dependent on commission agents and traders for meeting their credit needs. The trading class regained its marketing power by deciding where the farmers would sell their produce and to whom.

The Twelfth Plan Working Group on Agricultural Marketing summarised the major issues with the agricultural marketing system that were found (Planning Commission 2011).

The lack of adequate infrastructure for storing, grading, and post-harvest management; the unwillingness of the private sector to invest in logistics or infrastructure; the lack of transparency in the price-setting mechanism; the inadequate equipment and lack of training of the mandi staff; the lack of market information and access; the high cost of goods and services. Consequently, the APMC Act, which was established to defend middlemen's interests while enhancing market efficiency and transparency, is now being used to hinder competition, deny farmers the chance to obtain higher prices, and safeguard middlemen's interests..

Urgent reforms are needed to achieve the goals and address these inadequacies. Best marketing models should be adopted where producers sell directly to consumers, organised retail, efficient APMC mechanism and scaling up successful ventures. This will improve gaining power of producers and raise their share in value addition (Ramesh chand)

There was a decline in the growth of agriculture sector during the recent years. It was found that the share of agriculture declined in GDP due to high growth in service sector. Along-with this, some other factors like government expenditure in agriculture, public investment, subsidies for fertilizer usage, rainfall and agricultural prices were identified which affected the growth rate. The study revealed that the agricultural output at current prices is significantly dependent on government expenditure and suggested that a minimum increase in 10 to 15 percent per annum in expenditure will positively affect agricultural prices and an improved information network. The focus should be on increasing government expenditure in areas such as rural infrastructure, water management, storage and marketing, credit and research activities. There are several inadequacies like price gap, split promotion channels, distorted communication networks, unawareness regarding government strategies etc. in agriculture marketing in India. Critical reforms are required

to address these inadequacies and check the interference of middlemen. Latest models need to be adopted that improve the bargaining power of producers and create a transparent price mechanism (Chand, 2012).

Electronic National Agriculture Market

Today in India, the 'brick and click' market version of Mandi system is being adopted. The modest start to the enormous project to connect India's Mandis occurred at the APMC in Gulbarga in December 2011. Former IAS official from Karnataka R. Ramaseshan is the person behind the idea. In 2014, the Unified Market Platform (UMP) concept was adopted by the Government of Karnataka in conjunction with the National Commodity Derivative Exchange (NCDEX), and Rashtriya e-Market Service Private Limited (ReMS), a distinct organisation, was established to offer e-marketing services. It gives all traders with unified market licences access to take part in online trading of agricultural commodities at APMC markets located around the state. The approach was copied by other states, including Gujarat, Maharashtra, Andhra Pradesh, and Telangana, as a result of its success in Karnataka. A central sector initiative to forward the idea of the National Agricultural Market, or NAM, was subsequently authorised by the Cabinet Committee of the Government of India (Chand 2016).

The Indian government then launched pan-India electronic trading under e-NAM portal which seeks to unify the existing 1000 Agricultural Produce Marketing Committees (APMCs) in 18 states and 3 Union Territories till 1st January, 2022. Aforesaid APMCs are linked through uniform market platform so that it can serve the agriculturists and enable them to earn higher income by selling their produce at the highest prices accessible throughout the country.

The main proponent of e-NAM is the Small Farmer's Agribusiness Consortium (SFAC). SFAC is a recognised entity of the Ministry of Agriculture and Farmer Welfare's Department of Agriculture, Cooperation and Farmer Welfare (DAC&FW).

To better understand the difficulties in implementing this cutting-edge agricultural marketing project, the efficiency of the e-tendering method for pigeon pea in Karnataka was examined. To gather qualitative data, many rounds of focus group conversations involving market officials, farmers, and dealers were held. The study's conclusions demonstrated that e-tendering was effective in bringing price discovery transparency, cutting transaction time, raising market revenue, and boosting market competition. Some reasons of not adopting this method were also found as lack of computer knowledge, transparency hampered the price manipulations and traders felt that they lose their connection with farmers. The study shows that traders strongly prefer physical inspection of merchandise to online transfer to assure product quality. It was suggested that e-NAM implications should be improved by bringing all the commodities under e-trading and by providing proper infrastructure in the form of warehousing and banking facilities (Pavithra *et al* 2018) ^[13].

In an effort to connect more than 580 APMCs across the nation in a certain time frame, the electronic trading gateway of national agricultural market (e-NAM) was recently inaugurated. The e-nam was propelled in April 2016. From that point forward 1000 mandis linked in e-nam network from 18 states and 3 union territories. The existing APMC mandis are connected with the pan-Indian electronic trade web E-nam to establish a single window service for all APMC-related information and services. NAM addresses all the challenges

like multiple handling of agri produce, fragmented markets and multiple levels of mandi charges by creating a single and integrated market through online trading platform, both, at State and National level. This promotes real time price discovery, streamlining of procedures, removes hindrances in information dissemination and access to a nationwide market for the farmers and online payment mechanism.

The following organisations are involved in the operation of e-NAM:

- The NAM is being run by the Small Farmers' Agribusiness Consortium (SFAC) as the implementing agency with technical assistance from the Strategic Partner (SP).
- Directorate of Inspection and Marketing (DMI).
- Center for National Informatics (NIC).
- Strategic Affiliate (SP).
- UT Administration • State Governments.
- Directorate of Agricultural Marketing/State Agriculture Marketing Board (SAMB).
- APMC/RMC (Agriculture Produce Marketing Committee/Regulated Market Committees).

Various Stakeholders of e-NAM

The various stakeholders involved with e-NAM are APMC's, Farmers, Traders, mandi board and FPOs. These are discussed in brief below.

• APMCs

The Agricultural Produce & Livestock Market Committee was set up in accordance with the APLM Act's regulations, and its acronym is APMC. Agricultural Produce Market Committee (APMC) Yard/Regulated Market Committees is the name of the market area that is managed by the market committee (RMC). Market areas are controlled with the goal of regulating the physical, electronic, and other marketing of livestock and agricultural products that have been registered. The location must include any building, fence, area with open space, street, and any cleaning, grading, packaging, and processing units present in the Market Committee's designated market area. Currently, 1000 markets from 18 states and 3 UTs are connected to the e-NAM network.

Any state that wants to connect their APMCs/mandis with NAM (State Agriculture Marketing Board) must make the changes outlined below to their APMC Act.

A single, state-wide trading licence termed as "Unified"; the levying of a single market fee for the entire state; and the provision of electronic trading and auctions as a method of price discovery

There are Several Ways that e-NAM can Help APMCs

Free software for system integration and automated transaction recording; complete trading data; real-time arrival recording; d) price trends, arrival, and trading activity analysis; automated financial information recording; Lessening of the need for labour.

• Farmers

Farmers can easily register on e-NAM by using any of the following methods:

- a) Through the e-NAM Portal at <http://www.enam.gov.in>;
- b) Through a mobile application; or
- c) Through Mandi Registration (at gate entry)
- d) There are no fees required to register on e-NAM.

The Following are Some Ways they will be benefited

Better price discovery increases trade transparency;

Access to far more markets and buyers; Real-time updates on prices and arrival at adjacent mandis;

Quick payments will allow you to establish a solid financial profile. With the help of e-NAM, online payment methods like RTGS, NEFT, and BHIM UPI may be used to make quick payments to the bank accounts of the relevant merchants;

Through transparent bidding, an increase in buyers from other marketplaces, and improved negotiating power, e-NAM enables sellers to obtain higher pricing. The vendor is able to receive a price by assaying that is in line with the quality of the produce.

Every arrival is digitally recorded by e-NAM, which also assigns a special LOT id that can be followed from a mobile device until it is sold. The goal of this digitalization is to speed up transactions in an e-NAM mandi. The volume of visitors to that specific mandi and the time of year, all affect when a transaction will be completed.

• **Traders**

The following methods are simple ways for traders to register on e-NAM:

Through the e-NAM Portal at <http://www.enam.gov.in>; through a mobile application; and/or through Mandi Registration (by physically visiting a mandi).

There are no fees required to register on e-NAM.

The Following are Some Ways that they will benefit from e-NAM

Access to more sellers due to an increased reach into other mandis.

Access to more expansive and interconnected markets.

Having real-time access to information on the arrival, value, and cost of commodities; using a mobile app to do business easily; having access to online banking and payments. RTGS, NEFT, Debit/Credit Card, and BHIM are just a few of the methods for making electronic payments that are supported by e-NAM;

e-NAM makes it easier to assess the quality of 175 goods using parameters set by DMI. The assaying certificate issued by the authorities, which is also viewable on the mobile app, can be used to evaluate the quality of the produce.

• **Mandi Board**

There are 21 mandi boards in India. Currently 18 states and 3 union territories have joined e_NAM.

The following APMC Act amendments must be implemented by States (State Agriculture Marketing Boards) interested in integrating their mandis with NAM.

A single trading licence (Unified) that is accepted throughout the entire state; a single point of market fee collection throughout the entire state; and a provision for e-auction/e-trading as a method of price discovery.

• **FPOs**

Farmer producer organisations are acronym as FPOs. Farmer Producer Organizations are based on the idea that farmers, who produce agricultural goods, can organise groups. The Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India, has charged the Small Farmers' Agribusiness Consortium (SFAC) with facilitating this process by assisting the State Governments in the development of Farmer Producer Organizations (FPOs). In order to increase the economies of scale and the member farmers' negotiating power, the FPO's role is to operate as an aggregator for member farms, including from inputs to output. If there are unsold lots, FPO/FPC must make the necessary logistical arrangements.

2050 FPOs have currently been added to the e-NAM platform.

Benefits of e-NAM

- NAM guarantees additional products will be available at farmers' local mandi.
- NAM provides access to a bigger national market for secondary trading for the mandi's local traders.
- All of the major mandis in the States will gradually be incorporated into NAM, ensuring uniform processes for issuing licences, collecting fees, and moving produce.
- We can anticipate big advantages in the near future thanks to better farmer returns, lower buyer transaction costs, and steady consumer prices and availability.
- It will support the storage and transportation of agricultural products in a scientific manner.

Process of e-NAM

A market yard (mandi), where agricultural commodities are brought, passes through a number of steps from gate admission to market exit the farmer first registers himself with e-NAM before bringing his produce to the market. The commodity weighment, either lot-or vehicle-wise, comes after this activity. To test for quality, a sample is taken. Following that, the auction process starts. The farmer leaves the mandi if the product is not sold, and if the auction is successful, the buyer takes the product to the post-trade exit. The payment is settled through an online mechanism i.e. either through RTGS, NEFT or any other mode of payment. The figure depicts the process in a concise manner.



Fig 2: Process of eNAM

Current Status of e-Nam

e-NAM has been integrating with new states and apmcs at a very prolific rate. As of 26 Feb. 2022, there are 1000 markets integrating in 18 states and 3 UTs.

List of states and UTs integrated with e-NAM are as follows:-

e-NAM in Haryana

On 1 November 1966, the erstwhile province of East Punjab was divided into the present-day state of Haryana. It occupies less than 1.4 percent (44,212 km²) of India's total land area and is located in the north of the country. 22 districts, 6 administrative divisions, and 72 sub-divisions make up Haryana. The majority of the agricultural crops are produced

in Haryana, which has historically been an agrarian society. The two main crops grown are wheat and rice

With its initial rollout in 8 states across the nation in April 2016, the e-NAM system was introduced in Haryana. In Haryana, 54 mandis are connected via e-NAM as of December 2019. The duty of integrating the mandis under the e-NAM platform has been delegated to the Haryana State Agricultural Marketing Board (HSAMB) (Economic Survey of Haryana, 2016-17). This body was established on August 1st, 1969, to exercise supervision and control over the State's Market Committees. Out of 54 mandis, 37 were connected during the first phase of e-NAM, and the remaining 27 throughout the following phases.

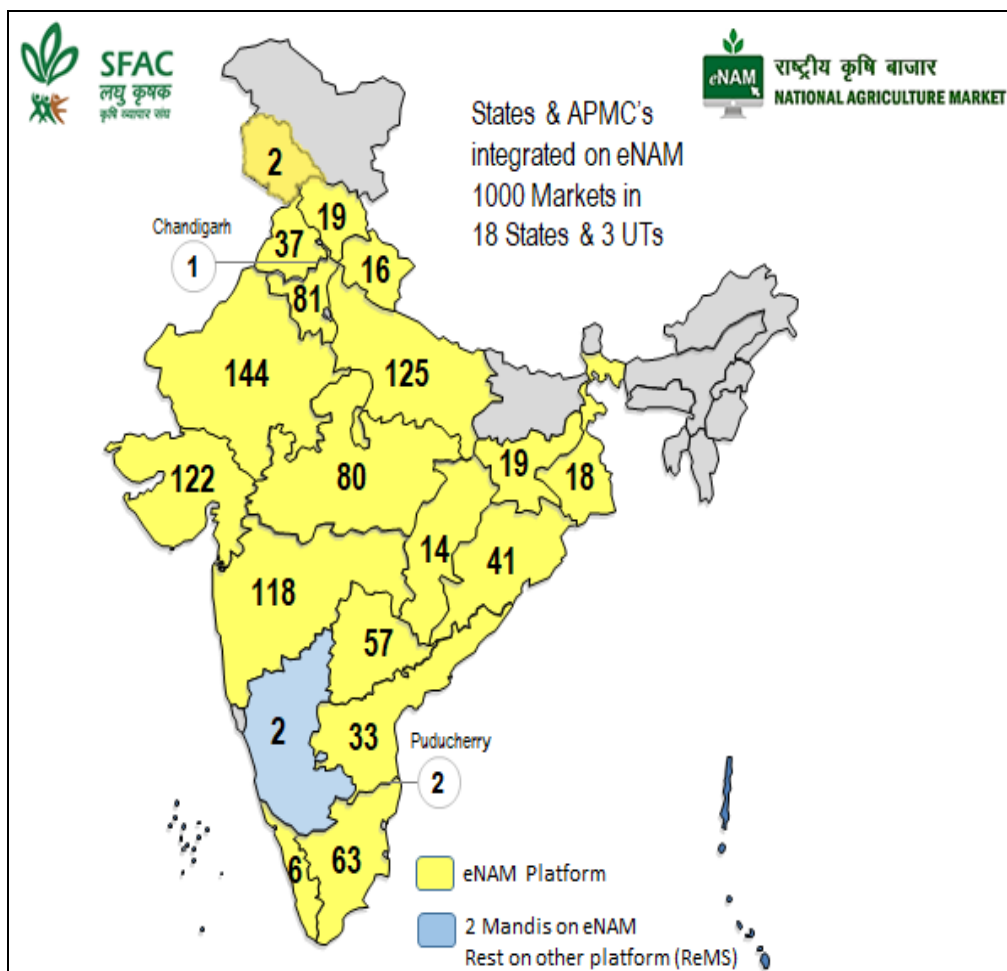


Fig 3: List of states and UTs integrated with e-NAM

Status of Regulated Markets in Haryana

There are currently 107 regulated markets in Haryana, spread over 22 districts, and there are also close to 174 sub-yards as of 2018-19. In Haryana, each regulated market serves, on average, 64 villages. Rewari has the most villages per regulated market, and Karnal and Jind districts all have six regulated markets, the most of any district. Districts in Sonapat and Nuh come after Rewari. The district with the most sub-yards is Hisar, followed by Sirsa and Kaithal. Total number of stakeholders registered on e-NAM as on 31st January 2022 are 1,75,87,962. Out of this total 27,63,157 comprises of Haryana. Further bifurcation of different stakeholders of India as well as Haryana can be depicted from the data given below.

Table 5: Break up of Stakeholders in e-Nam in India.

State	21
Traders	2,13,844
Commission Agents (CAs)	1,02,068
Service Provider	0
FPOs	2,050
Farmer	1,72,70,000
Total	1,75,87,962

Table 6: Break up of Stakeholders in e-Nam in Haryana.

State	HARYANA
Traders	12,938
Commission Agents (CAs)	24,868
Service Provider	0
FPOs	238
Farmer	27,25,113
Total	27,63,157

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