

# Digital Transformation in Agriculture: An Elucidation of e-NAM Registration and Trading Mechanisms

**Manjunatha P Paled<sup>1</sup>, Bhopala Upasana D<sup>1</sup>, B. Swaminathan<sup>2</sup> and Punith Kumar<sup>3</sup>**

<sup>1</sup> ICAR-Directorate of Groundnut Research, Junagadh-362 001

<sup>2</sup> Junagadh Agricultural University, Junagadh-362 001

<sup>3</sup> Department of Agribusiness Management, College of Agriculture, UAS Dharwad-580 005, Karnataka, India

\*Corresponding Author: [manjunatha.paled@icar.gov.in](mailto:manjunatha.paled@icar.gov.in)

Agriculture, the backbone of human civilization, has undergone significant transformations over the years. One major shift in the recent years is the rise of online trading platforms, which have completely transformed the buying and selling process for agricultural goods. Traditionally, agricultural trade in India was characterized by inefficiencies, middlemen, and limited market access for farmers. However, the introduction to online trading platforms has disrupted this age-old system, offering farmers a direct channel to sell their produce and connect with buyers across the country. According to recent data from the Ministry of Agriculture & Farmers' Welfare, online trading platforms have contributed to a significant reduction in post-harvest losses and improved farmers' income by up to 20% in certain regions.

The inception of e-trading in agriculture gained prominence in India in the early 2000s with the launch of online platforms designed for commodity trading. Leading the charge were the Multi Commodity Exchange (MCX) and the National Commodity and Derivatives Exchange (NCDEX), pioneering the electronic trading of agricultural commodities such as wheat, rice, pulses and spices. In the 2010s, the Indian government launched several initiatives to promote e-trading and improve market infrastructure in agriculture. One notable initiative was the establishment of the National Agriculture Market (e-NAM) in 2016, which aimed to create a unified national market for agricultural commodities by integrating existing physical mandis (wholesale markets) through an online trading platform.

## History and status of e-NAM

The e-NAM scheme is a flagship initiative launched by the Government of India to create a unified national market for agricultural commodities. It operates through an online trading portal that connects agricultural produce markets (APMCs) across the country. Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing e-NAM under the aegis of Ministry of Agriculture and Farmers' Welfare, Government of

India. The e-NAM portal provides a single window service for all APMC related information and services, including commodity arrivals, prices, bids and offers.

With an initial integration of only 585 APMCs to e-NAM platform during its inception in 2016, its initiative has significantly expanded its reach notably to total of 1,389 Agricultural Produce Marketing Committees (APMCs) as of 2024. The highest number of APMC's linked with e-NAM were found in Tamil Nadu (157), followed by Rajasthan (145), Gujarat (144), Madhya Pradesh (139), Maharashtra (133) and Uttar Pradesh (125). Increasing number of mandis registered to e-NAM reflects the positive impact of it in India. (Source: e-NAM.gov.in)

Recently, the Union Minister of Agriculture and Farmers Welfare launched the Platform of Platforms (PoP) under the (e-NAM) on 14<sup>th</sup> July, 2022. This will increase farmers' digital access to multiple markets, buyers and service providers and bring transparency in business transactions with the aim of improving price search mechanism and quality commensurate price realisation. The PoP will create a digital ecosystem, which will benefit from the expertise of different platforms in different segments of the agricultural value chain. 41 service providers from different platforms are covered under POP facilitating various value chain services like trading, quality checks, warehousing, market information, transportation etc. It enables farmers, FPOs, traders and other stakeholders to access a wide variety of goods and services across the agricultural value chain through a single window, thereby giving more options to the stakeholders. The inclusion of various service providers not only adds to the value of the e-NAM platform, but also gives the users of the platform options to avail services from different service providers.

## Key technical features of e-NAM:

- 1. Online Trading Portal:** The e-NAM portal serves as a centralized platform where farmers, traders, and buyers can conduct electronic trading of agricultural commodities in real-time.

2. **Single License Across Markets:** Through e-NAM, farmers can obtain a single license that allows them to sell their produce in any APMC registered under the scheme, eliminating the need for multiple licenses and reducing bureaucratic hurdles.
3. **Quality Testing and Grading:** The platform facilitates quality testing and grading of agricultural produce through accredited laboratories, ensuring standardization and quality assurance.
4. **Transparent Price Discovery:** e-NAM provides farmers with access to real-time market prices, enabling them to make informed decisions and obtain fair prices for their produce.
5. **The e-NAM platform promotes cashless transactions,** offering farmers the convenience and security of digital payments, thereby reducing the risks associated with carrying large sums of cash. By streamlining the marketing process and reducing paperwork, e-NAM improves efficiency in agricultural marketing, leading to faster transactions and reduced post-harvest losses.

#### Benefits of Trading on e-NAM

- ✚ Transparent Online Trading
- ✚ Real-Time Price Discovery
- ✚ Better Price Realization for Producers
- ✚ Reduced Transaction Cost for Buyers
- ✚ Stable Price and Availability to Consumers
- ✚ Quality Certification, Warehousing, and Logistics
- ✚ More Efficient Supply Chain
- ✚ Payment and Delivery Guarantee
- ✚ Error Free Reporting of Transactions
- ✚ Enhanced Accessibility to the Market

#### Advantages for Various Stakeholders

##### Farmers

Farmers can sell products without the interference of any brokers or mediators by generating competitive returns from their investment.

##### Traders

Traders will be able to perform secondary trading from one APMC to another marketing committee in India. The local traders can get access to the larger national market for secondary trading.

##### Buyers, Processors & Exporters

Buyers such as retailers, processors or exporters will be able to source commodities from any markets in India by decreasing the mediation cost.

Their physical presence and dependence on intermediaries are not required.

**Consumers:** e-NAM will expand the number of traders, and the competition among them will increase. This transforms into stable prices and availability to the consumers.

**Mandis (Markets):** The monitoring and regulation of traders and commission agents will become accessible as the reporting system will be generated automatically. The transparency in the process excludes the scope of manipulation of auctioning/tendering process. Market allocation fee will rise due to an accounting of all transactions taken place in the market. It will lessen the manpower requirements as the auctioning or tendering process is carried out electronically. It also reduces information asymmetry as all the activities of an APMC can be directly known from the official website.

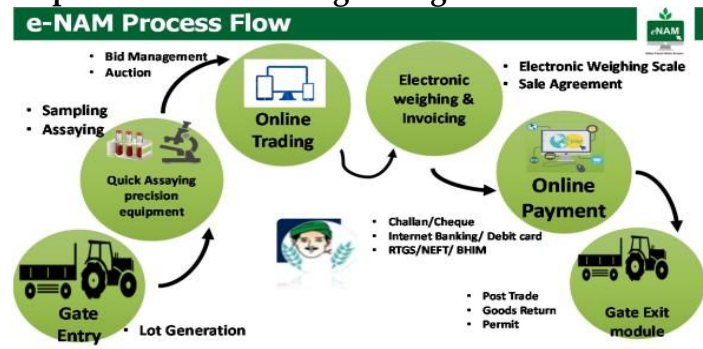
#### How farmers can register to e-NAM portal?

The registration process for participating in the e-NAM scheme is designed to be simple and user-friendly. Farmers can follow these steps to register:

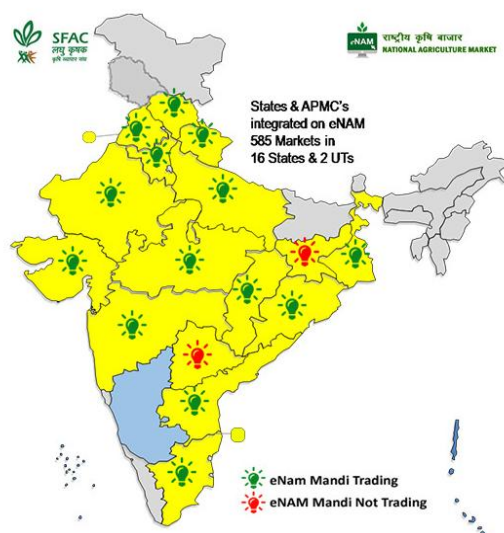
1. Visit the e-NAM portal (<https://enam.gov.in>) and click on the "Registration" option.
2. Select relevant registration type (out of available options like seller/buyer/commission agent/service provider)
3. Select registration category as applicable out of individual farmer/ farmer producer company/ co-operative/ farmer group (SHG)/ Government agency/ other (aggregator etc) and then select the state and mandi of your choice.
4. Fill up the personal details such as name, address, Aadhaar number and bank details, accurately.
5. Upload supporting documents of bank details such as bank passbook/cancelled check and identity proof such as Aadhaar card/voter ID/Passport etc. for verification.
6. Once the registration is complete, farmers will receive a unique login ID and password, which they can use to access the e-NAM portal by logging in and participate in online trading.
7. After Successful Login to your Dashboard, you will be able to see the Arrivals and Trade activities happening in all the APMC for notified commodities in NAM.

**Note: List of mandis (APMCs) registered under e-NAM can be accessed by visiting:** <https://enam.gov.in/NAMV2/home/mandis.html#2/home/mandis.html#>

## Steps involved in trading through e-NAM



- Farmer registration and generation of unique lot entry IDs will be done once farmers arrived at the gate (distinct ID for every batch of produce brought in) containing essential details such as the farmer's name, the type and quantity of produce, and more.
- With this unique ID, farmers proceed to the auction hall, where samples are collected for quality assessment.
- Following quality checks, the data will be entered into the e-NAM portal.
- Buyers or traders having valid a license, will bid their prices for the quantity and quality commodities of their desire using either mobile apps or computer kiosks available in the market.



**Fig. 01: States with e-NAM and without e-NAM mandi trading**

- Upon bidding, the farmer or seller has the option to accept or reject the bid; in the event of rejection, a second round of bidding ensues.
- Upon acceptance, the commodity undergoes weightment, with all weightments being integrated with the main computer to maintain records in the portal using a separate unique ID.
- Once weightments are completed, a sale receipt is generated and issued to farmers by mandi

officials, and payment is transferred to the farmer via RTGS on the same day or the next day.

## Glimpse of Success stories of e-NAM

### Adoni first market in the country to receive one crore bids on e-NAM platform

The Adoni market yard located in Kurnool district is the second largest market Yard in Andhra Pradesh. Primarily Cotton, Castor seed, Ground Nut, Sunflower seeds, and Tur are traded in the market Yard. The market yard has implemented e-NAM since March 2017 and it is actively encouraging farmers and traders to participate in the platform. Adoni APMC stood 1<sup>st</sup> in the country with most bids received for lots *i.e.*, one crore bids for 11.34 Lakh lots as on 20.01.2023. Adoni has been at the forefront in promoting competitive bidding with around 9 bids per lot on an average resulting in better prices for farmers for his/her produce. The market yard has achieved more than 30 bids on an average frequently which is a unique achievement for the e-NAM market yards in the state and in the country achieving true purpose of e-NAM at its fullest.

The market yard is also providing various support infrastructures for the effective implementation of e-NAM. The market yard has set up assaying lab for testing ground nut, pulses etc. So that the farmer gets right prices for his/her lots and the trader can get the best quality produce. Market yard has price display boards so that the farmers are updated about the prevailing prices and other information pertaining to e-NAM reducing the information asymmetry. The market is also equipped with E-NAM integrated weighing machines, which transfer weighing data directly to the e-NAM platform, removing the possibility of manual error or manipulation.

(Source: <https://enam.gov.in/web/blog>).

### Inter State Apple Trade with Jammu & Kashmir using e-NAM platform

Jharkhand State Agricultural Marketing Board is taking every step to promote e-NAM in the state and providing multiple facilities at APMC level for the stakeholders of e-NAM, like Digital Weighing Scale, MATT AI-Based Gain Analyzer, storage facilities etc. e-NAM is becoming a user-friendly platform for the FPOs, Farmers and traders in the state. Jharkhand is also promoting inter mandi and interstate trade among the e-NAM traders. Since inception, Jharkhand has successfully done the inter-state trade with Uttar Pradesh, West Bengal, Odisha, Maharashtra, and Jammu & Kashmir.



In recent Apple season, Jharkhand has promoted inter-state trade of Apple with Jammu & Kashmir using e-NAM platform. Till date, Jharkhand has traded 3291 Quintal of Apple worth 117 Lakh from Jammu and Kashmir which is highest in the country (as on 01-Feb-2023). Traders of Dhanbad, Ramgarh, Garhwa and Koderma APMCs have purchased Apple from Handwada, Sopore, Anantnag, Parimpora, and

Pulwama APMCs of Jammu & Kashmir using e-NAM platform. Traders also used e-NAM online payment option to make their payments directly to farmers. (Source: <https://enam.gov.in/web/blog>).

**Note:** Stakeholders can also use e-NAM mobile application for online trading that is similar to e-NAM portal.

**Table 1: Different types of commodities traded in e-NAM**

Category of Commodity	No. of Commodities	Names of commodities
Food Grains/ Cereals	35	Mushk BMushk Budji Rice, Amaranth Seed, Arhar, Arhar Dal Split, Bajra, Barley, Barnyard Millet, Basmati rice, Browntop Millet, Buck Wheat, Chakhao or Black Rice, Chana Dal Split, Chana whole, Foxtail Millet, Horse Gram, Jowar, Kabuli Chana Whole, Khesari Dal, Kodo Millet, Little Millet, Lobia, Maize, Masoor whole, Moong Dal Split, Moong whole, Moth, Oats Raw, Paddy, Proso Millet, Ragi, Rajma, Urad Dal Split, Urad whole, Wheat, White Peas.
Oilseeds	14	Castor seed, Cotton Seed, Kusum seed, Linseed, Mustard seed, Neem Seeds, Niger Seed, Peanut kernel, Pongam seeds, Rapeseed, Sal Seed, Sesame seed, Soybean, Sunflower seed.
Fruits	45	Amla, Apple, Apricot, Avocado, Baji Banana, Banana, Ber, Bilimbi, Breadfruit, Cherry Red / Black, Custard apple, Garcinia, Grapefruit, Grapes, Guava, Jackfruit, Jamun, Kinnow, Kiwi, Lady Finger Banana, Lemon, Litchi, Mango, Mangosteen, Mootty Fruit, Musk melon, Mysore Banana, Orange, Papaya, Papaya Raw, Passion Fruit, Peach, Pear, Pineapple, Plum, Pomegranate, Rambutan, Raw Mango, Red Banana, Sapota, Sarda, Soursop, Stawberries, Sweet orange, Watermelon.
Vegetables	59	Aloe Vera, Arrowroot, Banana Raw, Beetroot, Bhindi/Okra, Bitter gourd, Bottle gourd, Brinjal, Broccoli/Calabrese, Button Mushroom, Cabbage, Capsicum, Carrots, Cauliflower, Cluster beans, Colocasia vegetable, Coriander leaves, Cucumber, Curry Leaves, Drumstick, Fenugreek Leaves, Garlic, Gherkin, Ginger, Green Amaranthus, Green chillies, Ivy gourd, Jimikand (Suran), Lesser yam, Lobia Pods, Lotus Stem, Mint Leaves, Mustard leaf, Onion, Oyster Mushroom, Pea, Pointed gourd, Potato, Pumpkin, Raw Turmeric, Red Amaranthus, Reddish, Ribbed celery, Ridge Gourd, Round chilli, Safed Petha, Sem, Snake Guard, Snow Mountain Garlic, Spinach, Sponge Gourd, Spring Onion, Sugar Snap Peas, Sweet Corn, Sweet potato, Tapioca, Tinda, Tomato, Winged bean.
Spices	16	Ajwain, Black Pepper Whole, Cardamoms Whole, Cloves Whole, Coriander whole, Cumin, Dried Raw Mango Slices, Dry Ginger, Fennel seed, Fenugreek seed, large cardamom, Mace Whole, Poppy Seed, Red chilli, Tejpata, Turmeric.
Miscellaneous	50	Almond Kernel, Anthurium, Areca nut (betel nut), Bamboo, Banana Stem, Betel leaves, Carnation, Chhappan Kaddu, Chironji, Chrysanthemum, Coconut, Coconut with Husk, Cotton, Gerbera, Ginger Seed, Gladiolus, Green Henna Leaf, Groundnut with pods, Guar seed, Hilsa, Isabgol, Jack Fruit Seed, Jaggery, Jute Seeds, Khandsari, Lily, Mahua flower, Mahua Seed, Marigold, Nutmeg Whole, Persimmon, Pinenut, Raisins, Raw Arrowroot Powder, Raw Cashew nut, Raw Coffee Beans, Raw Honey, Raw Jute, Rittha, Rose Cut Flower, Safed Musli, Saffron, Silk Cocoon, Spray Chrysanthemum, Tamarind, Tender coconut, Tuberose, Tulip, Walnut Kernel, Walnuts in shell.

**Table 2: Break-up of Stakeholders registered under e-NAM (as of 31.05.2024)**

No. of states adopted e-NAM	23 states and 4 UTs
Traders	2,58,664
Commission Agents (CAs)	1,12,567
Service Provider	79
FPOs	3,803
Farmers	1,77,47,254
<b>Total</b>	<b>1,81,22,367</b>

**Source:** e-NAM website (<https://enam.gov.in/web/dashboard/stakeholder-data>)

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