



Digital Inclusion: Fortifying Agricultural Marketing

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ARTICLE INFO	ABSTRACT
<p>Research Article Received on August 06, 2023 Revised on September 09, 2023 Accepted on October 15, 2023 Published on October 21, 2023</p> <p>Article Authors Shobha Pandey, Reetika Bhatt, Neha Joshi</p> <p>Corresponding Author Email nehaagrieco@gmail.com</p>	<p>Agriculture produce has achieved reasonable growth rate in India but efficiency in marketing that produce is still a major concern. An efficient marketing system helps in optimization of resource use, output management, income realization of farmers and growth of agro based industries. In India, agricultural marketing is noted by fragmented supply chain, multiple market players ultimately affecting efficient marketing. Both central and state government has taken strenuous efforts to resolve issues related to post harvest supply chain. One of the remarkable steps in this direction is to bring agricultural marketing within the ambit of digital inclusion. In Uttarakhand, agriculture sector is dominant with 70 percent population directly or indirectly dependent on agriculture. The state has tremendous potential for cultivation of horticultural crops and special attention has been given to marketing of horticulture produce. Although Uttarakhand is governed by APMC act, the markets are not functioning up to mark. The study attempts to highlight the problems faced by farmers in marketing the agricultural produce in Uttarakhand. The paper thoroughly focuses on the advantages of online trading platform– NAM, in overcoming various limitations like direct marketing of produce, multiple taxes, inadequate logistics and infrastructure. Uttarakhand has shown a positive attitude towards this latest initiative by integrating five mandis to platform, leading to transparent operations in mandis.</p>
<p style="text-align: center;">PUBLICATION INFO</p> <p>International Journal of Agricultural Invention (IJAI) RNI: UPENG/2016/70091 ISSN: 2456-1797 (P) Vol.: 8, Issue: 2, Pages: 239-247 Journal Homepage URL http://agriinventionjournal.com/ DOI: 10.46492/IJAI/2023.8.2.15</p>	<p style="text-align: center;">KEYWORDS</p> <p>Agricultural Marketing, Digital Inclusion, e-NAM, Horticulture Produce, Post-Harvest Supply Chain</p>

HOW TO CITE THIS ARTICLE

Pandey, S., Bhatt, R., Joshi, N. (2023) Digital Inclusion: Fortifying Agricultural Marketing, *International Journal of Agricultural Invention*, 8(2): 239-247. DOI: 10.46492/IJAI/2023.8.2.15

Agriculture plays a pivotal role in economic development, as it is by far the single biggest enabler of inclusive growth for India. It not only fulfils the nation's consumption demand but also provides opportunities for employment generation, raw materials for food processing companies, capturing foreign exchange etc. India is predominantly an agrarian economy as majority of workforce is largely engaged in agriculture and the allied sectors. However, there is a mismatch between the dependent workforce dependent on agriculture and their relative output. There is big chasm between the two.

Hilly terrain, scattered fields, improper infrastructure and geographical constraints hindering the optimum utilization of resources characterize Uttarakhand. Given the diverse terrain of the state and its favorable climatic conditions, agriculture plays a significant role in state economy. The sector continues to be the mainstay as about 70 % of the population is dependent on the sector for their livelihood and food security and contribute 23.4 % in State Gross Domestic Product (GSDP). The size of the sector in absolute value terms continues to increase at compound annual growth rate (CAGR) of 2.8 %.

The major problems faced by the farmers of Uttarakhand related to agricultural marketing such as lack of transportation and marketing infrastructure, improper storage facilities, payment procrastination, exploitative behavior of traders, undue charges etc. Both the central and state government have done lots of efforts to resolve pre harvest issues like enhancing soil quality, boosting financing facilities etc., but a very little heed has been paid to post harvest supply chain like agricultural marketing which plays significant role in income realization of farmers and boosting the Indian economy. The marketing of horticultural produce is a complex process. Moreover, market segregation and inconsistencies in state laws on the subject has resulted into worse situation. The efficient marketing system is the need of the hour as agricultural markets plays a significant role in agriculture sector that supposed to add to the welfare of the producers as well as consumers

Agricultural Marketing

Agriculture is the core source of our food security. Almost 1.3 billion mouths to feed, imports are not going to help if there is severe dearth of food. Merely cultivation of horticultural produce is not enough but the marketing plays equally important role. According to the National Commission on Agriculture (XII Report, 1976), agricultural marketing is a process which starts with a decision to produce a saleable farm commodity, and it involves all the aspects of market structure or system, both functional and institutional, based on technical and economic considerations, and includes pre- and post-harvest operations assembling, grading, storage, transportation and distribution. The first and the foremost function to be performed in agricultural marketing is concentration where agro produce is collected and brought to a central location for buying and selling purpose. Grading is segregating the horticultural produce into different categories because of variety, quality, size, etc. Processing is transformation of products into consumable products. Warehousing is storage of products from production until its final consumption. This helps to preserve the products from spoiling, contamination, etc. Packaging is done for easy handling, preventing products deterioration, luring customers, etc.

The last function performed in all marketing is distribution of products from warehouses to retail outlets for final consumption. Agricultural marketing has many issues and concerns which requires attention. Presently, the agricultural marketing system in the country is dominated by fragmented supply chain, multiple market players leading to high wastages (GOI 2013). Due to high wastage, there is a mismatch between the demand and supply thereby affecting the value realization by farmers. Uttarakhand is endowed with different. Farmers are residing mainly in remote areas. The produce has to reach ultimately to the consumers for its final use and consumption. There are different agencies and functionaries through which this produce passes and reaches the consumer. A marketing channel or channel of distribution is therefore, defined as a route taken by the ownership of goods as they move from producer to consumer.

Marketing Functionaries

In Uttarakhand the farmers are scattered in remote villages while most of the consumers reside in semi-urban and urban areas. This horticultural produce has to reach consumers for its final use and consumption. There are different functionaries through which this produce reaches the consumer. The different functionaries that are dominant in agricultural market are wholesalers, commission agent, wholesaler cum commission agent, retailers, transporters etc. These market participants in the form of market functionaries play an important role in facilitating trade of agricultural produce. Table 1 displayed the availability of functionaries in different markets of the state.

Haldwani market is dominating amongst all other market as displayed by table 1, with highest number of functionaries and covers almost 20% of total functionaries as the market has highest number of wholesaler-cum-commission agents during the study period. Haldwani market plays a prominent role for Kumaon region as it is the largest city in this region. It is also popularly known as 'Gateway of Kumaon'. All the agricultural produce of Kumaon region is routed to this market for disposal and from here it further goes to various other markets like Delhi, Bombay, and Punjab etc. Haldwani market has close proximity and excellent connectivity to the national capital Delhi and other leading market of the country.

Table 1. Number of Functionaries in Uttarakhand State

Markets	Wholesaler-Cum-Commission Agents	Wholesalers	Commission Agents	Retailers	Transporters
Gadarpur	120	12	-	360	1
Haldwani	773	96	-	236	-
Haridwar	479	52	14	248	8
Jaspur	67	110	1	38	-
Kashipur	233	135	29	-	3
Kichha	120	60	41	87	1
Ramnagar	140	64	6	86	2
Rishikesh	175	35	-	250	10
Rudrapur	392	10	4	111	2
Sitarganj	138	22	-	156	1
Tanakpur	53	13	-	136	3
Vikasnagar	137	46	-	240	-

Source: Agmarknet.nic.in

Table 2. Principals and Submarket Yards in Uttarakhand

S. N.	District	Principal Markets	Submarkets
1.	Nainital	1. Haldwani 2. Ramnagar	Mukhani,Lamachod,Lalkuan,Bhowali, Kaladhungi Shankarpur
2.	Udham Singh Nagar	3. Rudrapur 4. Kashipur 5. Jaspur 6. Sitarganj 7. Nanakmatta 8. Khatima 9. Kichha 10. Gadarpur 11. Bazpur	Bhurarni,Bharaula, Bagwala, Bhainsiya - - Bhudiya - - Chandayan Sultanpur patti Kilakheda
3.	Champawat	12. Tanakpur	Banbasa, Champawat, Lohaghat
4.	Dehradun	13. Dehradun 14. Vikasnagar 15. Chakrata 16. Rishikesh 17. Mangalore 18. Lakshar 19. Haridwar Union 20. Roorkee 21. Bhagwanpur 22. Kotdwar 23. Karanprayag 24. Uttarkashi 25. Tehri Grahwal 26. Almora 27. Pithoragarh	Diowala, Mussorrie - Sahiya - - Landora,Rayasi,Govardhanpur, Bheekampur Bahadarabad Bhagwanpur - Dugadda - Not Yet Functional Not Yet Functional Not Yet Functional Not Yet Functional

Agri-Marketing Regulation in Uttarakhand

Uttarakhand Krishi Utpadan Mandi Parishad (UKUMP) is the nodal agency responsible for agricultural marketing in the state. Presently, agricultural markets are regulated under the Agricultural Produce Marketing committee (APMC) Act that was enacted with an objective of providing genuine markets to the farmers for selling their produce at a competitive price. The state government has amended the APMC Act, in accordance with Model Act 2003. The amended Act facilitates setting up of private markets, farmer consumer markets, contract farming, e-trading etc., (Gov of Uttarakhand). There are 27 principal market yards, 31 sub market yards in the state for marketing of agricultural produce. It is surprising to note that the marketing regulation is effective in only 11 districts of the state out of total 13 districts. The markets here not only lack in number of regulated markets but also it lacks proper infrastructure therein (Bhupal, 2013). Rest two districts namely Bageshwar and Rudra Prayag are still not under marketing regulation. Moreover, the principal market yards are prominently located in mainly five districts and that too in plains regions of the districts (Deepika *et al.* 2016). Although, the entire hill region is covered under the provision of Agricultural Produce Market Act, 1964, the marketing regulation has not been effectively implemented in five districts of the region namely Almora, Chamoli, Pithoragarh, Tehri and Uttarkashi as these markets are still non-functioning as depicted in table 2. In Uttarkashi, however there is regulated market established in the district headquarters but it is not functional, therefore, most of the fruit and vegetables are sold in Dehradun and Kanpur; probably absence of working of regulated market is a cause and effect that there are no storage and processing facilities in Uttarkashi (Bhupal 2013).

Current Status of Regulated Markets in India

An index has been constructed by NITI (National Institution for Transforming India) Ayog to compare the status of reforms in agriculture sector across states and UTs. The index is based on actions taken by each state and UTs to reform the system of agriculture marketing facilitate and liberalize lease in and lease out of agricultural land, and liberalization of regulation on felling and transit of trees grown on private land.

The information on these aspects was taken from the concerned Ministries of Government of India. Market reforms aimed to promote competition, efficiency, transparency, and removal of regulatory restrictions having adverse effect on producers, modernization of marketing, and creation of healthy trading environment are included. These reforms indicate the ease of doing agribusiness and range of choices and options granted to producers to sell their produce. The index is termed as Agricultural Marketing and Farmer Friendly Reforms Index (AMFFRI).

Table 3. Ranking of states in terms of implementation of marketing and other farmer friendly reforms, as on October, 2016.

State	Score	Rank
Maharashtra	81.7	1
Gujarat	71.5	2
Rajasthan	70.0	3
Madhya Pradesh	69.5	4
Haryana	63.3	5
Himachal Pradesh	59.5	6
Andhra Pradesh	56.2	7
Karnataka	55.5	8
Telangana	54.3	9
Goa	52.8	10
Chhattisgarh	51.4	11
Jharkhand	49.4	12
Uttar Pradesh	47.8	13
Punjab	43.9	14
Assam	37.1	15
Mizoram	37.0	16
Nagaland	33.3	17
Sikkim	32.6	18
West Bengal	32.5	19
Tripura	29.1	20
Odisha	27.9	21
Uttarakhand	25.2	22
Arunachal Pradesh	21.1	23
Chandigarh	20.1	24
Tamil Nadu	17.7	25
Meghalaya	14.3	26
Jammu & Kashmir	7.4	27
Lakshadweep	7.4	28
Delhi UT	7.3	29
Puducherry	4.8	30

Table 3 portrayed that Maharashtra achieved first rank in implementation of various reforms.

The state has implemented most of the marketing reforms and it offers most congenial and conducive environment for doing agribusiness among all the states and UTs. Gujarat ranks second with a score of 71.5 out of 100, closely followed by Rajasthan and Madhya Pradesh. Uttarakhand stands at 22nd position and got only 25.2 points, clearly depicting the reforms easing the agribusiness in Uttarakhand is not up to the mark. It is really an alarming situation. It is the high time to look into this matter. All these facts accentuate the need of detailed study of major constraints of agricultural marketing.

Objectives

Therefore, study is conducted focusing on the marketing constraints faced by the farmers of Uttarakhand and highlighting the role of digital inclusion in resolving the issues of agricultural marketing.

Methodology

A detailed descriptive analysis of literature and data from varied sources was employed to attain the requisite aim of the study.

Results and Discussion

Following are the major constraints identified faced by the farmers of Uttarakhand in reference to agricultural marketing based on the literature review:

Insufficient Information

The farmers do not have knowledge of demand and supply of their produce in the market. Majority of the farmers still prefer receiving market information through the traditional sources like regulated markets, traders and fellow farmers visiting the market yards. The reason behind relying on traditional sources is trustworthiness. Latest sources of information like television, SMSs etc., are emerging information sources for the farmers.

Lack of Transportation Facilities

Presently, the average reach of a single regulated market is around 460 square kms, thus farmers have to travel a long distance to sell their produce. The central and state governments are in the process of creating more regulated markets so

that the command area of each market does not extend beyond 80 square kms. Uttarakhand is a hilly state and most of the produce from hills comes to the plain region of the state for disposal, it becomes important to provide specialized and improved transportation facilities for quality maintenance and timely delivery.

Shortage of Money

Landless or marginal farmers lack the resources to either buy or lease more land or invest in farm infrastructure irrigation, power, farm machinery, etc. to compensate for the scarcity of land. As land scarcity intensifies with population growth, farming progressively becomes a less viable source of livelihood.

Lack of Space of Scientific Storage and Distress Sale

Most of the farmers in Uttarakhand are poor and indebted. They can merely fulfill their daily basic needs. Lack of scientific storage facilities a major problem for the farmers to keep their agricultural produce safe. They cannot wait to get higher prices as there is a lack of scientific storage facilities and most of the horticultural commodities are perishable in nature so they are compelled to sell their produce to the traders at a lower rate.

Delayed Payments

The traders are not paying the amount of the produce of farmers instantly. They delay the payment and if they make the payment at the instant of purchase, traders deduct some amount on the excuse that they have not received payments from other parties.

Exploitative Practices

Traders are not giving sales slip to the farmers to avoid tax. Due to this, it becomes very difficult for the farmers to prove their income and get loans from the banks. Intermediaries receive double commission (both from buyers and sellers) thus making the consumer to pay for the spread. During peak seasons when they produce at low prices from farmers, they do not reduce the prices to the consumers drastically and lean seasons when consumer prices are high; the farmers do not get higher returns of their produce.

Digital Inclusion

In the current agricultural marketing framework, the farmers get poor reward of their efforts. The farmers are suffering to get fair intermediaries engulf price of their produce as larger share of their income realization. Moreover, the current framework of APMC faces several constraints related to direct marketing of produce, multiple tax levies, inadequate logistics and infrastructure. These constraints and low-income realization to the farmers led to the creation of Unified National Agricultural Market (NAM). National Agriculture Market (NAM) is a pan-India electronic trading portal, which connects the existing APMC mandis to create a unified national market for agricultural commodities. It is implemented under the supervision of Ministry of Agricultural and Farmers Welfare. It is a virtual network supported by physical markets at the backend. Prime Minister Mr. Narendra Modi launched e-NAM portal on 14th April, 2016 to commemorate the birth anniversary of Dr. Bhim Rao Ambedkar who worked for the empowerment of poor throughout his life.

NAM Portal provides a single window service regarding all APMC related information and services. This includes commodity arrivals & prices, buy and sell trade offers, provision to respond to trade offers, among other services. The agriculture produce continues to pass through mandis as usual, a digital market will support in reducing transaction costs and information asymmetry. Agriculture marketing is controlled by the States as per their Agri-marketing regulations, under which, the State is fragmented into several market areas, each of which controlled by a separate APMC imposing its own separate regulation. This fragmentation of markets, even within the State, hinders free flow of agri commodities from one market area to another and multiple handling of agri-produce and multiple levels of mandi charges ends up escalating the prices for the consumers without commensurate benefit to the farmer. e-NAM addresses these challenges by creating a unified market through online trading platform, both, at State and National level and promotes uniformity, streamlining of procedures across the integrated markets, removes information asymmetry between buyers and sellers and promotes real time price discovery, based on actual demand and supply.

The promotes transparency in auction process and access to a nationwide market for the farmer, with prices commensurate with quality of his produce and online payment and availability of better quality produce and at more reasonable prices to the consumer. An amount of Rs. 200 crores have been earmarked for the scheme from 2015-16 to 2017-18. There is a provision of giving of Rs. 30 lakh/ mandi by Department of Agriculture and Cooperation for the development of labs for grading of agricultural produce.

Status of Stakeholders under e-NAM: Uttarakhand in Comparison with that of India

Uttarakhand due to its unique agro climatic conditions holds a crucial status in off-season cultivation. However, its geographical conditions proved as constraints in the road of marketing of the produce. Hilly terrain of the state makes it hard to transport the produce from hotspots to the requisite place. Since the implementation of e-NAM in the state, APMCs are registered only in four districts of the state *viz.* Dehradun, Haridwar, Nainital and Udham Singh Nagar, covering only the plain terrain of the state. This portrayed the deployed status of agricultural marketing in hilly areas of the state. Total number of APMCs registered under e-NAM i.e., 16 as displayed in table 5 represents 1.26 percent of total APMCs (1260) of India, as depicted in table 5. The distribution of stakeholders in the state is portrayed in table 4. It presented the share of stakeholders existing in state in comparison to that of the nation under e-NAM. Commission agents are the stakeholders with maximum share in the state in comparison to that of the country. They hold a share of 2.46, followed by that of traders (2.20 %), FPOs (1.89 %) and farmers (0.44 %).

Requisites for Successful Implementation

In order to integrate with this e-NAM portal, it is necessary for the States to amend their marketing regulations in alignment with these three conditions: a single license to be valid across the State, single point levy of market fee and provision for electronic auction as a mode for price discovery. Only those States/ UTs that have completed these three pre-requisites will be eligible for assistance under the scheme.

Table 4 Stakeholders in Uttarakhand in comparison to India

Particulars	Uttarakhand	India
Traders	5307 (2.20)	2,40,500 (100.00)
Commission Agents	2,663 (2.46)	1,08,237 (100.00)
Service Provider	0 (0.00)	0 (0.00)
Fpos	46 (1.89)	2,433 (100.00)
Farmer	76,635 (0.44)	1,74,89,327 (100.00)
Total	84,651 (0.47)	1,78,40,497 (100.00)

Table 5 Registered APMCs under e-NAM in Uttarakhand

Districts	APMCs under e-NAM
Dehradun	Dehradun Rishikesh Vikasnagar
Haridwar	Haridwar Roorkee
Nainital	Haldwani Ramnagar
Udham singh nagar	Bazpur Gadarpur Jaspur Kashipur Khatima Kichha Nanakmatta Rudrapur Sitarganj
Total	16

Implementation Phases

The NAM scheme will be implemented over a period of 3 yrs. from 2015-16 to 2017-18. It will cover 585 regulated market yards in this three-year period. Small Farmers' Agribusiness Consortium (SFAC) is the lead promoter of NAM. SFAC is a registered society of Department of Agriculture, Cooperation & Farmers' Welfare (DAC&FW) under Ministry of Agriculture and Farmer Welfare. SFAC through open tender selects a Strategic Partner (SP) to develop, operate and maintain the NAM e-platform. SFAC implements NAM with the technical support of SP and budgetary grant support from DAC&FW.

DAC&FW meets the expenses on software and its customization for the States and is providing it free. DAC&FW is also giving a grant as one time fixed cost up to Rs.30 lakhs per Mandi (other than to the private mandis) for installation of the e-market platform. Around 6500 APMCs operate throughout the country of which 585 district level mandis in States/UTs desirous of joining are planned to be linked by NAM. 400 mandis are planned to be integrated by March 2017 and the remaining by March 2018. The Cabinet Committee on Economic Affairs had approved a Central Sector Scheme for Promotion of National National Agricultural Market through Agri-Tech Infrastructure Fund (ATIF). The government has allocated Rs. 200 crore to the newly created ATIF.

Table 6. State-wise number of Mandis Integrated with e-NAM (as on 03.04.2017)

S. N.	State	Total Number of Mandis Integrated with e-NAM
1.	Andhra Pradesh	22
2.	Chhattisgarh	14
3.	Gujarat	40
4.	Haryana	54
5.	Himachal Pradesh	17
6.	Jharkhand	19
7.	Madhya Pradesh	58
8.	Maharashtra	44
9.	Odisha	9
10.	Rajasthan	25
11.	Telangana	44
12.	Uttar Pradesh	66
13.	Uttarakhand	5
	Total	417

Source: www.pib.nic.in

Current Status

According to the stated plan of action by March 2017, 400 regulated market yards planned to integrate with NAM, but as per the current status we can see the figure as 417 which depict the successful implementation of this project and overwhelming response from various states. Uttarakhand has shown a positive attitude towards this initiative by amending the APMC act in line with Model APMC act and by integrating five mandis with this online trading platform, which will bring transparency in mandi operations.

The five mandis that are integrated are Gadarpur, Haridwar, Kashipur, Kichha, Sitarganj, but still 22 mandis are yet to be integrated.

Positive Impact of e-NAM

Accurate and Time Efficient Transactions

e-NAM is an online trading platform incorporated to function under the existing system of regulated markets with pragmatic reforms to induce transparency and promote competitive participation of market functionaries. The market participants are able to maximize utilization of the marketplace for efficient price discovery as well as robust transactions. Moreover, there is reduction in the time that is wasted while doing the manual auctions.

Farmers are the Deciders

Through this initiative, the farmers will get wider options for selling their produce and greater accessibility to the markets. Farmers will have the sole right for deciding the fate of their produce. They are the ones who themselves can decide whom to sell, when and where to sell. They can take their produce to the grading labs and thereafter they can make the deal with the buyer.

Promotion of Warehousing Sector

Since in this online platform, the buyers are involved from a distant location and the auction will decide from which APMC the produce will be bought, so getting it delivered to the desired location will be a major constraint. The concept of Warehouse Based Sell (WBS) is a potential solution to overcome such an issue and hence, can led e-NAM as a grand success. In the case of e-NAM, if the commodities sold through APMCs are routed through warehouses, or if the APMCs arrange for warehousing/cold storage facilities through tie-ups locally, it will be easy for buyers to trade at any APMC without hurrying the delivery. In order to make such an arrangement available, quality storage will be needed across the nation. This will require the active role of an agency such as the Warehousing Development and Regulatory Authority to increase awareness about accreditation of quality warehouses and to speed up the process of accreditation.

Better Quality Products

The transparency in the system led to marketing of quality produce, helping the consumers to get the desired attributes and farmers by fetching the premium price for the supplied quality traits.

Reduction in Food Inflation

The reduction in the number of intermediaries will automatically reduce the prices of produce.

Game Changer in Doubling Farmer's Income by 2022

National Agriculture Market (NAM) is one of the key ones that have been launched and pilot projects are on, with 12 states showing interest. NAM could be a game changer and the goal to double farm income by 2022 set by the Prime Minister cannot be achieved without NAM. This project has the potential to replicate the success seen in the green revolution. However, the initial process is facing several issues like lack of leadership, with frequent change of officials in charge, etc.

Conclusion

The marketing system supposed to be efficient enough to fulfill nation's demand as well as the add welfare to farmers and market functionaries. The present study reveals the fact that there are 26 principal market yards and 31 sub markets are there in Uttarakhand. These markets are functioning in 11 districts and rest two districts are still out of the ambit of state APMC act. The markets are mainly located in plain regions. Fragmented supply chain with inadequate marketing infrastructure, long intermediation and lack of accurate and timely market information have posed challenges to the agricultural marketing system in the country, which needs to be addressed and rejuvenated. To resolve all these related to agricultural marketing, bringing marketing under the domain of digital inclusion is one of the major initiatives taken by government. Digital inclusion in the field of agricultural marketing will lead to lots of benefits. The setting up of NAM is a landmark initiative, which will bring an upheaval in agricultural marketing. The online marketing platform will reduce the number of intermediaries, which will in turn reduce the food inflation.

It provides accurate and time efficient transactions. Farmers are the deciders of their agricultural produce. As this scheme is based on warehouse-based sales, it will lead to the promotion of warehousing sector. The farmers will be able to keep their perishable produce safely which will led to reduction of distress sale and better income realization. As there is the provision of establishment of labs at various mandis for grading of agricultural produce, there will be better quality products. The consumer will be able to get products at a reasonable price and the farmers will get better income realization for their agricultural produce. This income realization can be a game changer in doubling farmer's income by 2022. For successful enactment of the framework, participation of private sector is of uttermost importance.

Along with the efficient market regulation, the framework also promotes private sector participation over variety of services including technology, assaying, weighing, warehousing etc. The government shall modernize the existing infrastructure in line with the requirement of the NAM framework to work integrally with the private sector as well. National Agriculture Market (NAM) is one of the key ones that have been launched and pilot projects are on, with 12 states showing interest. This project has the potential to replicate the success seen in the green revolution. However, the initial process is facing several issues like lack of leadership, with frequent change of officials in charge, etc. Briefly, the recent initiatives certainly will help in strengthening the rural economy and would generate employment that is more rural. It would help in increasing productivity and in achieving goal of food security and inclusive growth in the country. Definitely, there are certain technical glitches, which need to be resolved, but for this both central and state government have to put joint efforts. To curb the agricultural crisis from becoming a social nightmare digital inclusion can be a fruitful solution.

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