

# COMPARATIVE ANALYSIS OF MARKETING APPROACHES FOR PERISHABLE AND NON-PERISHABLE AGRICULTURAL PRODUCTS IN MEERUT, UTTAR PRADESH

Raj Singh <sup>1</sup>✉, Dr. Nikhil Garg <sup>2</sup>

<sup>1</sup> Research Scholar, Department of Management, Mewar University, Chittorgarh, Rajasthan, India

<sup>2</sup> Assistant Professor, Department of Management, Mewar University, Chittorgarh, Rajasthan, India



## Corresponding Author

Raj Singh, [singhrj814@gmail.com](mailto:singhrj814@gmail.com)

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## ABSTRACT

Farming in the Meerut district, Uttar Pradesh is a very important component of rural life and economy of the area. Marketing of agricultural produce varies vastly, whether the product is perishable, i.e., fruit, vegetables, and milk, or non-perishable i.e., wheat, rice, pulses and mustard. The paper is a comparative analysis of the marketing policies used in the two categories. The aims are to find out the main strategies, to compare them with each other regarding profitability, market coverage, and quality of products, and to analyze the problems that affect their successful functioning. The evidence indicates that perishable products demand fast delivery systems, refrigeration, and new digital solutions to reduce spoilage and expand access to consumers. Conversely, non-perishable goods enjoy the advantages of traditional wholesale, bulk trading, and cooperative, which offer stability in prices and long-term security. Another factor that the study has identified to reform agricultural marketing in the region is the APMC Act, digital marketing strategies, and contract farming. Finally, this study highlights the significance of combining contemporary methods and the traditional systems to make them sustainable, profitable, and minimize wastage by farmers and consumers in Meerut.

**Keywords:** Agricultural Marketing, Perishable Products, Non-Perishable Products, Marketing Strategies

## 1. INTRODUCTION

Agriculture has long been recognized as the backbone of India's economy, providing employment to nearly 60% of the population and contributing significantly to GDP (Meerut GDP, 2011). Uttar Pradesh, one of the country's most agriculturally productive states, is known for its cultivation of wheat, rice, sugarcane, mustard, pulses, and vegetables. Within Uttar Pradesh, Meerut district holds a prominent position due to its fertile soil, advanced irrigation systems, and proximity to large consumer markets such as Delhi and Ghaziabad (Kumar & Singh, 2023). However, the marketing of agricultural products in this region is shaped by the intrinsic characteristics of the crops—whether they are perishable or non-perishable.

Perishable agricultural products such as fruits, vegetables, milk, and dairy require quick and efficient marketing systems. Their short shelf life makes them vulnerable to spoilage and post-harvest losses. Studies highlight that perishables benefit from strategies such as cold-chain logistics, improved packaging, and direct-to-consumer platforms that reduce intermediaries and enhance profitability (Comosoft, n.d.; Barker, 2016). Digital platforms and e-marketing

strategies have become increasingly significant in extending the reach of perishable goods to urban consumers (Farmonaut, 2025; Gitarattan Journal, 2020).

The same situation does not apply to non-perishable goods, such as wheat, rice, pulses and mustard. Long storage of these crops enables farmers to have a leeway when it comes to selling at the right time depending on the market factors. Non-perishable marketing channels are usually noted to include wholesale markets, cooperatives and procurement via government agencies under such frameworks as Agricultural Produce Market Committee (APMC) Act (Roy, 2011). It has been found that the profit margins on non-perishables might be less than perishables, but they are more stable and secure to farmers (Prince Kumar et al., 2017; Kumar and Singh, 2023).

Nonetheless, both types of categories have various problems. Inadequate cold storage facilities, insufficient exposure to modern transport, and expensive transportation are all limiting factors to perishables, which causes huge losses after the harvest (International Journals SSRG, 2017). Non-perishables in their turn experience such problems as price fluctuations, middlemen dominance, and late payment (Sharma et al., 2021-22; The Pharma Journal, 2022). In addition, the farmers in Meerut do not have sufficient information on digital marketing devices and contemporary branding, which restrict their access to wider markets (Callin.io, 2025; Agriculture Institute, 2024).

This study aims at comparing the marketing strategies used in perishable and non-perishable agricultural products in Meerut district. Through the analysis of profitability, market penetration, quality of products, and other related issues, the study aims to offer some information on how conventional and contemporary strategies should be combined to ensure efficiency. As the digital technologies and the changing consumer demand increase, the agricultural marketing in Meerut is facing a crossroads and promises a chance of developing sustainably and raising the income rates of the farmers.

## 2. LITERATURE REVIEW

### 2.1. MARKETING OF PERISHABLE AGRICULTURAL PRODUCTS

Barker (2016) in his study on the supply chain management of vegetables in Allahabad emphasized that perishable agricultural products such as vegetables, milk, and fruits require rapid and well-organized marketing systems to prevent spoilage and maintain quality. The shelf life of perishable items is very short, and therefore, any inefficiency in storage, transportation, or distribution can lead to heavy post-harvest losses. In the case of India, these losses have been estimated at nearly 30–40% for fruits and vegetables, highlighting the urgent need for effective marketing systems. Comosoft (n.d.) noted that perishables can only be marketed successfully if producers adopt strategies such as cold-chain logistics, scientific packaging, and real-time distribution to ensure product freshness upon delivery to consumers.

Packaging is one of the critical areas of perishable marketing. Nielsen (n.d.) pointed out that packaging and displaying fresh produce is a key element in the preferences of consumers. An example would be vacuum-sealed packaging and modified-atmosphere packaging that increase shelf life, consumer confidence, and make the product more marketable. Correct packaging will also minimize losses due to wastage during transportation which is usually a problem in areas such as Meerut where the infrastructure is still in its formative stages.

The marketing of perishables has been transformed by the arrival of the direct-to-consumer models. The production methods of farm-to-market and producer farmers organization (FPOs) decrease the dependence on intermediaries so that the farmers receive better prices and the consumers enjoy fresher products (Roy, 2011). Also, new avenues like online shopping of groceries and delivery subscriptions are gaining popularity in big cities allowing farmers to avoid wholesale mandis. This is especially pertinent in Meerut as it is close to the met markets such as Delhi where the consumer demand of produce is high.

However, challenges persist. The works of International Journals SSRG (2017) and Adarsh Journals (n.d.) show that inadequate cold storage, inadequate road accessibility, and exploitations by middlemen are key hindrances to successful marketing of perishables. In addition, farmers do not have much knowledge on value-addition like grading, branding, and organic certification that would otherwise make a great difference to their profitability. Therefore, perishables may have good prospects of high margins, although they demand a modern infrastructure, logistics, and awareness of the farmers to market

## 2.2. MARKETING OF NON-PERISHABLE AGRICULTURAL PRODUCTS

An inter-comparative study of marketing expenses associated with growing mustard in the Meerut district revealed that non-perishable products like wheat, rice, pulses and mustard have the benefit of being stored and farmers can decide when to sell their products (Kumar and Singh, 2023). These goods are not easily spoiled at once, as the perishables, and that allows trading in large volumes, contract farming, and extended supply chains. This feature renders them applicable to both government procurement systems as provided by the Agricultural Produce Market Committee (APMC) Act as well as to large wholesale mandis.

In their economic study of rapeseed-mustard in Meerut, Prince Kumar et al. (2017) emphasized that, although the sale of non-perishable crops has reduced chances of losses after harvest, it is significantly affected by the changes in prices in the national and international markets. Price fluctuations, inability to purchase in time and reliance of intermediaries to sell the produce has been a challenge to farmers. In addition, government policies like Minimum Support Prices (MSP) are very important in defining the marketing environment of non-perishable products, and, in most cases, in deciding on whether a certain crop will be profitable to cultivate during a season or not.

Storage has a significant role to play during the marketing of non-perishable products. The Plant Archives (2023) argue that farmers are forced to sell their products at distress as soon as they are harvested because of the lack of adequate warehouse and godown infrastructure in Meerut. Not only does it lower their profitability, but also it restricts their bargaining power. A better storage system, warehouse receipt financing system, and coordinated marketing systems may allow farmers additional freedom to wait until the markets are favorable.

The cooperatives and contract farming are also used to market non-perishables. Roy (2011) noted that there are new marketing channels in Uttar Pradesh such as contract farming agreement that has enabled farmers to have guaranteed buyers of their crops thereby minimizing uncertainty. The mentioned channels are especially useful with non-perishable products such as mustard and wheat where big processors and exporters are interested in long-term contracts. Nonetheless, contract farming is restricted because of the fear of exploitation by corporate purchasers by the farmers.

## 2.3. ROLE OF DIGITAL MARKETING IN AGRICULTURE

When talking about the digital expansion plans in the agricultural industry, this paper (Farmonaut) (2025) highlighted that the use of digital marketing has become an inseparable property of the farmers particularly in the shortening of the gap between the producers and the consumers. The electronic medium provides timely information on the market, trade opportunity in the online platform and higher price visibility. Applications, e-grocery shops, social media promotions, etc. are crucial in quick sales and minimization of wastage in the case of perishable products. The farmers in other states like Meerut can reach the urban consumers in Delhi or Ghaziabad directly through these digital mediums and therefore they are able to sell to a wider market as compared to the local mandis.

The journal of Gitarattan Journal of International Business Studies (2020) highlighted the appropriateness of online channels during the sale of perishable goods. The online system will ensure that the farmers are given a chance to sell their products to customers, restaurants and small retailers without involving other intermediaries. This does not only help in enhancing profitability, but it also provides the consumer with more confidence by telling them that the product can be traced. Moreover, digital products often provide logistical support, including the pick-up and delivery service, that will be necessary when dealing with perishable products.

Digital marketing plays a different part in the event of non-perishables. E-auction and online markets and commodity exchange systems allow traders and farmers to carry out large scales business. According to Callin.io (2025), non-perishables have the benefit of digital technology where they can sign a contract agreement with the processors, sell their products directly to wholesalers and are capable of engaging in the national trading systems. In addition, the use of electronic documents and electronic payment portals, allow to make the process more transparent, reduce the problem of late payments, which has historically been one of the problems among farmers (Sharma et al., 2021-22).

Nevertheless, digital marketing in agriculture is yet to be widely adopted due to a number of challenges. Farmers usually are not digitally literate and do not have the resources to be able to use the online platforms. According to the Agriculture Institute (2024), despite the potential of digital strategies, training and awareness programs are urgently

needed in the rural areas. In addition, there is also the problem of internet connectivity in villages which discourages extensive adoption. In spite of these obstacles, it is considered that digital marketing is a revolutionary tool that will be able to transform agricultural marketing by minimizing intermediaries, enhancing profitability, and opening new markets that are far away.

However, adoption of digital marketing in agriculture is still limited by several challenges. Farmers often lack the digital literacy and resources required to effectively use online platforms. The Agriculture Institute (2024) noted that while digital strategies have potential, there is a pressing need for training and awareness programs in rural regions. Moreover, internet connectivity issues in villages also hinder widespread adoption. Despite these barriers, digital marketing is seen as a transformative tool that can revolutionize agricultural marketing by reducing intermediaries, improving profitability, and expanding access to distant markets.

## 2.4. IMPACT OF PACKAGING AND CONSUMER PREFERENCES

Nielsen highlighted that packaging plays a pivotal role in shaping consumer preferences and purchasing decisions, particularly for perishable agricultural products. Consumers often equate the quality of packaging with the freshness and safety of the product, which makes packaging not just a protective measure but also a marketing strategy. For instance, fresh vegetables and fruits that are neatly packaged in ventilated boxes or sealed containers attract more buyers than loose produce, even when both are of identical quality. This demonstrates how packaging influences not only preservation but also consumer psychology.

Innovative packaging techniques have been shown to extend shelf life significantly. According to Adarsh Journals (n.d.), modified atmosphere packaging (MAP), vacuum sealing, and bio-degradable packaging materials are increasingly being adopted in urban markets for fruits, vegetables, and dairy products. These packaging methods help reduce spoilage and waste during transit, which is particularly important in regions such as Meerut where inadequate cold storage and long transport routes pose risks to product quality. For dairy products, packaging innovations such as aseptic cartons and PET bottles have improved safety and convenience while increasing market reach.

For non-perishable agricultural products, packaging serves a different purpose. Bulk packaging in jute bags or plastic containers ensures long-term storage efficiency while maintaining product quality (Prince Kumar et al., 2017). Proper labeling, including details on weight, grade, and source, builds consumer trust and aligns with government food safety standards (Agriculture Institute, 2024). Packaging innovations also play a role in branding; for example, mustard oil packaged in sealed bottles with attractive labels fetches higher market prices compared to loose oil. Thus, packaging influences both consumer behavior and profitability for farmers and traders.

## 2.5. CHALLENGES IN AGRICULTURAL MARKETING

Roy (2011) noted that marketing issues are one of the most unending problems in agricultural development particularly in Uttar Pradesh. The acute problems of perishable products are their exposure of spoilage, high cost of transport and poor cold storage facilities. According to International Journals SSRG (2017), almost one-third of perishable produce in India is wasted due to poor infrastructure, absence of refrigerated transportation as well as poor rural market connectivity. In Meerut though it is near the consumer market of Delhi, the farmers have been registering huge losses after harvest as a result of delays in the transport system and reliance on local mandis.

In non-perishable products, the problems are in various forms. Kumar and Singh (2023) report that non-perishable products like wheat and mustard are not susceptible to losses in the short run but are affected by other problems like fluctuations in prices and payments made late. Due to the exploitation of intermediaries, farmers are often forced to sell their produce at a low price per the Minimum Support Price (MSP). The domination of middlemen is also a topical aspect of the Meerut mandis, where farmers do not have bargaining power, and payment delays take place (Sharma et al., 2021-22).

The APMC Act has impacted negatively and positively on agricultural marketing. Although the primary purpose of the Act was to control the markets and equitable payments to farmers, according to research, conducted by Roy (2011), it frequently reinforced the presence of middlemen rather than empowerment of farmers. Nonetheless, new marketing options, including farmer producer organizations (FPOs), contract farming agreements, and online platforms are slowly transforming this (Callin.io, 2025). These options provide direct connection to buyers and an improved price

transparency and less reliance on intermediaries. Nevertheless, these strategies have not been adopted in Meerut because of the unawareness and infrastructural backup.

To conclude, perishables represent victims of infrastructural inefficiencies and post-harvest losses, whereas non-perishables are victims of financial and structural difficulties. These two issues need to be handled as one whole and this means that there needs to be a combination of policy changes, investment in storage and logistics and the education of farmers on the new marketing practices.

#### Comparative Studies and Regional Context

According to the Meerut GDP (2011) the agricultural activity in the Meerut district is well diversified with the type of crop and vegetable the largest being wheat and mustard and the category of crops dominated by vegetables and dairy being the largest in the perishable category. The agricultural profile of this district can be used to offer a special case of analyzing the variations in marketing strategies since it is a combination of the traditional form of farming and the new market-oriented form of farming.

In their research on marketing channels of cattle feed in Meerut, Sharma, Barker, Zechariah, and Kumar (2021-22) found that the perishable commodities are dependent on local markets and short supply chains to deliver the commodities in time. Cold-chain logistics are essential in vegetables and dairy products though its inadequate development in Meerut will be forcing farmers to sell their products at low prices promptly or risk spoilage. Conversely, according to the report by Plant Archives (2023), mustard and wheat are more embedded in the supply chains on the national level by bulk purchases and state-controlled markets. The difference points to the comparative stability of non-perishable marketing and the risky nature of perishables.

There are also comparative research findings of profitability and risk differences. Fruits and dairy are perishable goods that can give better margins because of increasing demands in the urban markets (Gitarattan Journal, 2020). These increased profits, however, have risks of wastage, fluctuation of prices and dependence on instant sales. On the other hand, non-perishables are more stable, especially with the help of MSP policies and storage facilities (Prince Kumar et al., 2017). This causes them to be less profitable unit-wise but more sure as to long-term farmer income.

Meerut has access to both perishables and non-perishables due to its location in the region close to Delhi-NCR. Producers of perishables have big, urban markets that demand their goods, yet the infrastructural gap makes them unable to use this opportunity to the fullest (International Journals SSRG, 2017). In the case of non-perishable goods, the marketing environment is dominated by the government procurement and wholesale markets, yet there are still issues with the delayed payment and warehouse space.

On the whole, comparative analysis of Meerut reveals that non-perishables and perishables demand completely different marketing approaches. Perishables require technology-based hubs in a short period of time, whereas the non-perishables necessitate the use of the traditional procurement and store systems. A medium-term measure that combines both modern infrastructure and the existing infrastructure is critical in empowering agricultural marketing in the region.

### 3. DISCUSSION

#### 3.1. IMPACT OF PACKAGING AND CONSUMER PREFERENCES

Nielsen (n.d.) emphasizes that packaging is not just a means of protecting agricultural produce but also a critical factor influencing consumer preferences and purchase decisions. For perishable goods such as fruits, vegetables, and dairy products, innovative packaging solutions significantly contribute to extending shelf life, maintaining freshness, and reducing post-harvest losses. Research indicates that consumers are more likely to purchase products that appear hygienic, visually appealing, and convenient to use. Modified Atmosphere Packaging (MAP) and vacuum-sealed containers are increasingly used for perishables, enhancing preservation and reducing spoilage during transportation and storage. In addition, branding through packaging, such as the use of eco-friendly materials and clear nutritional labeling, enhances consumer trust and loyalty. For non-perishable commodities like wheat, rice, pulses, and mustard, bulk packaging plays an essential role in ensuring long-term storage and maintaining quality. Labels that comply with Food Safety and Standards Authority of India (FSSAI) guidelines, including batch numbers, dates, and certification marks, improve credibility in the eyes of consumers. In modern markets, attractive packaging not only improves the aesthetic value but also provides farmers and traders with an edge in competitive retail environments. Thus, packaging emerges as both a protective and marketing strategy, bridging the gap between producers and consumers.

### 3.2. CHALLENGES IN AGRICULTURAL MARKETING

Roy (2011) notes that agricultural marketing in India faces several systemic challenges, with perishables being particularly vulnerable due to their short shelf life. Transportation inefficiencies, absence of adequate cold-storage facilities, and poor road connectivity in rural areas often result in significant post-harvest losses. According to International Journals SSRG (2017), smallholder farmers struggle to access modern logistics, which drives up costs and reduces their bargaining power in markets. The dependence on intermediaries further erodes profitability, as middlemen dictate prices and delay payments. For perishables, the lack of timely infrastructure leads to nearly 20–30% wastage in vegetables and fruits, severely impacting farmer incomes. In contrast, non-perishable commodities like cereals, pulses, and oilseeds face relatively fewer storage-related challenges but are not immune to systemic issues. Price volatility caused by fluctuating demand and supply, hoarding by traders, and inconsistent government procurement policies make income stability a concern for farmers. Additionally, the dominance of traditional wholesale markets regulated by the Agricultural Produce Market Committee (APMC) Act limits farmer access to direct buyers, thereby curbing their profit margins. While digital platforms and farmer-producer organizations (FPOs) are emerging to mitigate these challenges, the gap between infrastructure availability and market demands remains significant. Addressing these issues requires both policy-level interventions and grassroots-level reforms.

### 3.3. COMPARATIVE STUDIES AND REGIONAL CONTEXT

Sharma et al. (2021-22) argue that a comparative perspective is essential for understanding the marketing dynamics of perishables versus non-perishables, particularly in regional contexts like Meerut district. Meerut's agricultural economy is diverse, with wheat and mustard dominating the non-perishable segment and vegetables, sugarcane, and dairy products representing the perishable sector. Plant Archives (2023) highlights that perishables in Meerut are primarily sold through local markets, weekly mandis, and direct retail outlets, making them highly dependent on efficient logistics and cold-chain support. The absence of proper infrastructure often exposes farmers to risks of spoilage and price fluctuations. However, when marketed effectively through digital platforms and direct-to-consumer channels, perishables tend to yield higher profit margins due to consumer demand for freshness. On the other hand, non-perishable crops integrate more seamlessly into state and national-level supply chains, benefiting from bulk trading, cooperatives, and government procurement programs. Although profitability margins for non-perishables are relatively lower, they provide greater stability, as farmers can store produce and wait for favorable pricing. Comparative studies reveal that while perishables offer greater short-term profitability, they carry higher risks, whereas non-perishables ensure long-term financial security. In Meerut's context, a balanced approach that combines investment in cold storage for perishables and efficient warehousing for non-perishables can strengthen the overall agricultural marketing ecosystem.

### 4. CONCLUSION OF THE STUDY

Comparative analysis of marketing of perishable and non-perishable agricultural products in Meerut district brings out both opportunities as well as challenges in enhancing the agricultural marketing ecosystem. Vegetables, fruits, and milk are perishable goods that need instant distribution, cold-chain logistics, and digital distribution to reduce spoilage and reach the market as much as possible. Non-perishables such as wheat, rice and mustard enjoy the freedom of storage, large scale trading and fitting in national level supply chain, but these are susceptible to fluctuation in prices and domination by middle men.

Results indicate that although perishables are more profitable in terms of their demand by consumers through freshness and quality, they are not without numerous risks relating to wastage and lack of adequate infrastructure. Non-perishables offer a certain stability, and farmers are able to cope with the income variability, storing the fruit until the right moment, when the prices become good. Packaging, branding and labeling are important factors in determining consumer trust and preference especially in competitive market. In addition, digital platforms, farmer-producer organizations and e-auction systems are transforming the traditional marketing models by providing farmers with a better contact with consumers and lessening the use of intermediaries.

The role of government frameworks like the APMC Act and procurement policies are also highlighted during the study, which remain to define the accessibility to market and profitability of the farmers. To establish a sustainable and

effective marketing system in Meerut, policymakers and other parties should look at enhancing cold storage infrastructure, enhancing digital literacy of farmers, and extending cooperative patterns. Finally, the solution to the problem of profitability and survivability in the agricultural marketing system of Meerut district can be found in the means of balanced approach toward the use of modern technology and retaining of the traditional practices.

## 5. LIMITATIONS AND FUTURE DIRECTION

Although this study provides valuable insights into the comparison in marketing of perishable and non-perishable agricultural products in the Meerut district, some limitations acknowledged. The research is geographically restricted to a single district, which may limit the generalizability of findings to other regions with different socio-economic or infrastructural contexts. Data collection was also based on responses from a limited number of stakeholders, which may not capture the complete diversity of perspectives within the agricultural marketing system. Moreover, factors such as seasonal variations, climate impacts, and international trade influences were not explored in depth, which could further shape marketing outcomes. Future research should expand the scope by including cross-district or cross-state comparisons to highlight regional variations in agricultural marketing practices. Longitudinal studies could provide better understanding of how digital platforms, farmer-producer organizations, and government interventions evolve over time in reshaping the marketing ecosystem. Further, integrating advanced statistical models and supply chain simulations may help to identify strategies for reducing wastage, improving price stability, and enhancing farmer profitability. Such extended research would not only strengthen the existing conclusions but also to guide policymakers and practitioners in designing more inclusive, technology-driven, and sustainable agricultural marketing frameworks.

## CONFLICT OF INTERESTS

None.

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