



Digital and E-Commerce Platform for Direct Marketing of Horticulture Produce

*Naince Gupta, Deepak Lall and Shilpa Rana

Department of Horticulture, Naini Agricultural Institute (NAI), Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj-211007, U.P., India

*Corresponding Author's email: naincegupta3@gmail.com

Digital and e-commerce platforms have revolutionized the direct marketing of horticultural produce by connecting farmers directly with consumers, retailers, and exporters. These platforms reduce intermediaries, ensure fair pricing, and minimize post-harvest losses. Through mobile apps, online marketplaces, and digital payment systems, farmers can access wider markets and real-time demand information. Thus, digital marketing enhances transparency, profitability, and sustainability in horticulture, promoting rural entrepreneurship and strengthening the agricultural value chain.

Keywords: Agricultural, Digital, Marketplaces, Promoting, Strengthening.

Introduction

Horticultural produce (fruits, vegetables, flowers, spices, plantation crops) is highly perishable. Traditionally, marketing goes through multiple intermediaries (mandis, wholesalers, retailers), reducing farmers' share of profit. Digital and e-commerce platforms enable direct farmer-to-consumer (F2C) and farmer-to-business (F2B) marketing, ensuring better price realization, transparency, and reduced post-harvest losses.

Before digital and e commerce platform

Farmer →□ middle man →□ commission agent →□ whole seller →□ Retailers →□ Consumer.

After digital and e commerce platform

- F2C (farmer to consumer)
- F2B (farmer to business)
- B2c (business-to-consumer)
- C2c (consumer-to-consumer)
- D2c (direct-to-consumer)

What is digital and e commerce platform?

Digital platform: Digital marketplaces in Horticulture refer to online platforms that facilitate the buying and selling of horticultural produce, inputs, and services through internet-enabled systems. These platforms connect farmers directly with buyers, sellers, service providers, and institutions, eliminating multiple layers of intermediaries.

E-commerce : E-commerce in horticulture extends this concept by offering a full range of services including product listings, digital payments, logistics coordination, and customer support.

Objective of digital and E- commerce platform

- Market access challenges for small and marginal farmers.
- The role of technology in addressing inefficiencies in agri-marketing systems

- Emergence of digital marketplaces and e-commerce as transformative tools.

Importance of digital and E-commerce platform

- Improved price realization through reduced intermediaries
- Access to wider markets (local, national, international)
- Timely procurement of quality inputs
- Better inventory and post-harvest management
- Transparency and real-time information on pricing and demand
- Promotion of horti-entrepreneurship and digital literacy.

Key features of e-commerce platform

- User-Friendly Interface.
- Product Listing & Catalog Management.
- Quality & Traceability Features.
- Pricing & Payment Systems.
- Order & Inventory Management.
- Logistics & Cold Chain Integration
- Farmer-Consumer Connectivity
- Market Intelligence & Analytics
- Trust & Transparency

Benefits of e-commerce platform and digital marketing

1. Market Information Dissemination.
2. Linking farmers to buyer.
3. Promotion of Digital platform.
4. Financial Literacy and Services
5. Certification and traceability support.
6. Capacity building in digital skills
7. Real time advisory Linked in market.
8. Data collection and market planning.
9. Advocacy and policy Interface

Example of e-models for e-commerce Platform for Horticulture products

S. No.	Platform name	Region	Key service offer	Impact on Farmers
1.	De- heart	India	offer payment confirmations, digital invoices, and transaction histories	Helping farmers manage finances and maintain records.
2.	Ninja Cart	India	B2B fresh produce supply chain platform	Better farm-gate prices, efficient logistics
3.	Kisan Network	India	Farm-to-business digital trading platform	Direct sales to buyers, fair prices, reduced spoilage
4.	Jumbo tail	Global	Jumbo tail is a mobile platform allows bulk buyers to place orders directly, ensuring better market access for small producers.	Jumbotail is a B2B wholesale e-commerce platform connecting producers and brands to kirana stores
5.	Sahyadri Farms	Global	own digital platform for procurement, processing, and marketing.	Through its digital interface, farmers receive updates on pricing, order requirements, and export quality standards, helping them meet market demands more effectively.

6.	Big basket	India	Big basket also introduced a digital labelling system that enhances traceability by linking every product to its respective farmer.	The company supports its farmers by implementing technologies like geotagging to monitor sowing and harvest schedules, as well as providing weather forecasts and strategies to manage climate-related risks.
7.	ONDC (Open Network for Digital Commerce)	Global	ONDC provides complete access to the framework of digital commerce which includes a variety of services, including e-commerce platforms, logistics, payment gateways, and more	provide greater benefits to small enterprises and individuals who do not have exposure to traditional banking system

Challenge of digital and e commerce platform

- Language barriers and lack of localized interfaces.
- Lack of trust in digital payment systems.
- Digital literacy and access to smartphones/internet.
- Infrastructure gaps (cold chains, storage, logistics).
- price volatility and quality standardization.

Conclusion

Digital marketplaces and e-commerce platforms are redefining how farmers engage with markets. These platforms allow producers to list, promote, and sell their goods online either to wholesalers, retailers, or directly to end consumers. They also enable input procurement, access to credit, and real-time logistics, making them One-stop solutions for agricultural commerce . This system reshaping both horticulture and agricultural marketing by offering farmers direct access to buyers, real-time price information, and secure transaction systems. These tools reduce dependence on intermediaries, improve price realization, and expand market reach beyond local mandis.

References

1. Ahmed, S. T., & Saragih, A. I. (2021). E-commerce Business-to-Business (eB2B) Distribution Strategy and Network Design for Nanostores.
2. Banker, R. D., Mitra, S., Sambamurthy, V., & Mitra, S. (2011). The effects of digital trading platforms on commodity prices in agricultural supply chains. *MIS quarterly*, 599-611.
3. Bhooshan, N., Raman, M. S., Singh, A., & Sharma, A. (2025). Creating AgriStartups Ecosystem to Empower Youth and Women in Amrit Kaal. In *Advances in Agri-Food Systems: Volume II* (pp. 75-90). Singapore: Springer Nature Singapore
4. Munthali, N., Leeuwis, C., van Paassen, A., Lie, R., Asare, R., van Lammeren, R., & Schut, M. (2018). Innovation intermediation in a digital age: Comparing public and private new-ICT platforms for agricultural extension in Ghana. *NJAS-Wageningen Journal of Life Sciences*, 86, 64-76.
5. Pallavi, G. P., & Dsa, K. T. (2024). Technological Innovations to Promote Financial Inclusion: A Comprehensive Analysis of Digital Payment Systems and Blockchain Solutions. *The Future of Money Trends in Financial Innovation*, 31, 38.
6. Prodhan, M. M. H., Jalal, M. J. E., Alam, H., Mostofa, M. S., Khondker, B. H., & Khan, M. A. (2024). *Journal of Agriculture and Food Research*. *Journal of Agriculture and Food Research*, 16, 101209
7. Shelake, B., Kotkar, V., Mohate, S., & Dhnagar, D. (2016). *Research Journey*.