

## Agri FMCG: Where Agriculture Meets Next-Gen Retail

Kamalraj R<sup>1\*</sup> and Preethi S<sup>2</sup>

<sup>1</sup> M.Sc. (Horticulture), Dr.Y.S.R. Horticultural University, COH – Venkataramannagudem, Andhra Pradesh.

<sup>2</sup> Ph.D. (Horticulture), Dr.Y.S.R. Horticultural University, COH – Venkataramannagudem, Andhra Pradesh.

Corresponding Author : kamalhartz@gmail.com

Manuscript No: KN-V3-07/001

### Introduction

The FMCG (Fast Moving Consumer Goods) sector is undergoing a quiet revolution. No longer is limited to packaged snacks, toiletries or beverages, the FMCG lens now being applied to one of the most perishable and traditional categories: fresh fruits, vegetables and agricultural goods. Driven by consumer demand for hygiene, traceability and convenience, startups and established players alike are reimagining how agri-produce can be treated not just as commodities, but as branded, fast-moving consumer goods. This article explores the transformation through innovative supply chains, hyperlocal delivery models, branding, and case studies from across India.

### 1. Fresh is the New Fast: FMCG's Next Frontier

The COVID-19 pandemic redefined consumer preferences. Freshness, hygiene and delivery assurance became top priorities. This shift accelerated the transformation of fresh produce into a branded category.

**Case Study: BigBasket Fresh** - BigBasket introduced “BB Daily” to deliver fresh vegetables, fruits, and dairy every morning. Its subscription-based model mimics the regularity of FMCG consumption, with added benefits like no minimum order and early morning delivery.

**Case Study: Zepto** - With its promise of 10-minute delivery, Zepto has expanded its dark stores to include a wide variety of fruits and vegetables, creating an FMCG-like experience for perishables by reducing delivery times and ensuring consistent availability.

### 2. Tech-Enabled Supply Chains

The backbone of fresh FMCG transformation lies in the supply chain. Startups are using AI, IoT and predictive analytics to streamline farm-to-consumer journeys.

**Case Study: Ninjacart** - Ninjacart is a pioneer in building a B2B agri-supply chain. It connects farmers directly with retailers, reducing middlemen, ensuring fair prices and minimizing post-harvest losses. With real-time data on demand, logistics and weather, it optimizes produce movement from farm to store.

**Case Study: WayCool** - WayCool leverages AI and blockchain to manage over 50,000 metric tons of food annually. They ensure temperature-controlled transport, quality checks at every node and data analytics to forecast demand, cutting wastage by up to 30%.

### 3. Branding the Unbranded: The Rise of Fresh Produce Labels

Branding agricultural produce helps build trust and recall among consumers. Packaging, certification, and storytelling play vital roles.

**Case Study: Fresho by BigBasket** - BigBasket's in-house brand “Fresho” is used for packaged vegetables and fruits, offering clean, sorted and hygienically packed items with QR-code-based traceability.

**Case Study: Sahyadri Farms** - Maharashtra-based Sahyadri Farms exports branded grapes and tomatoes to global markets. Their packaging highlights traceability, farmer stories and GI-certifications, building consumer trust.

**GI Tag Influence** Products like Ratnagiri Alphonso mango, Nagpur orange and Bangalore blue grape are being sold under GI labels that ensure authenticity and boost premium pricing.

#### 4. Hyperlocal Delivery and Aggregation Models

Speed and convenience are vital to competing in the FMCG landscape.

**Case Study: Otipy** - Otipy uses a community buying model where consumers place pre-orders and Otipy sources directly from farmers. It ensures fresh delivery within 12-24 hours, with 35% lower wastage compared to traditional models.

**Case Study: Swiggy Instamart and Blinkit** - These platforms have added fresh produce to their offerings. Through dark stores located in residential clusters, they ensure quick delivery and inventory optimization based on real-time demand.

#### 5. Farmer-to-Consumer (F2C) and D2C Innovations

The D2C and F2C models are empowering farmers and startups to sell directly to consumers, cutting intermediaries.

**Case Study: Krishi Jagran's Krishi Network** - The platform allows farmers to connect with urban consumers and logistics providers. It provides pricing data, crop advisory and market access for fruits and vegetables.

**Case Study: Farmizen** - Farmizen connects consumers with urban farms and allows them to subscribe to weekly produce boxes. The app also provides transparency about what was grown, when and how.

**Case Study: Agrowave** - Agrowave operates mobile pickup stations that collect produce directly from farms and integrate them into a central distribution system powered by AI.

#### 6. Value Addition, Sustainability and Zero Waste

Surplus or imperfect produce is now being transformed into value-added products like juices, purees and dehydrated snacks.

**Case Study: Innoterra** - Innoterra converts unsold bananas into flour and smoothies, creating an additional income stream for farmers.

**Case Study: Ecozen** - Ecozen offers solar-powered cold storage systems that prolong the shelf life of perishables, especially in rural areas.

**Circular Model Example: Happy Roots** - Happy Roots uses imperfect or surplus farm produce to create baked goods and snacks. Their model ensures zero waste and provides fair prices to women farmers.

#### 7. Role of E-commerce Giants and Retail Chains

Modern retail giants and e-commerce platforms are bridging the gap between rural producers and

urban consumers by integrating agricultural produce into their FMCG portfolios.

### **Case Study: Reliance Fresh & JioMart**

Reliance's farm-to-fork model sources directly from farmers via Reliance Retail's backend infrastructure. JioMart now offers daily staples, fruits and vegetables with next-day delivery, integrating rural supply chains into India's digital commerce ecosystem.

### **Case Study: Amazon Fresh**

Amazon Fresh provides scheduled grocery deliveries, including fresh produce. It uses customer purchasing data to forecast demand, manage inventory and reduce food waste across cities like Delhi, Bengaluru and Mumbai.

## **8. Cold Chain Infrastructure and Storage Innovations**

Maintaining the freshness of perishable agri-goods is crucial for FMCG transformation. Cold chain logistics and decentralized storage facilities ensure product quality and minimize spoilage.

### **Example: LEAF (Lawrencedale Agro Processing)**

LEAF focuses on cold chain and grading infrastructure, working with marginal farmers in Tamil Nadu and Karnataka to deliver graded and packaged vegetables to organized retailers.

**Data Insight:** According to the National Centre for Cold-chain Development (NCCD), India loses ₹92,651 crore annually in perishable food waste due to gaps in cold chain logistics. Expanding storage infrastructure can make agri-FMCG more reliable and scalable.

## **9. Consumer Trends: Health, Organic & Local**

There's a growing demand for chemical-free, organic and locally grown produce, reshaping how agri-products are marketed in FMCG style.

### **Case Study: Organic India & 24 Mantra Organic**

These brands have pioneered FMCG-style branding of organic food, offering QR-coded, certified organic grains, pulses and fresh produce with clear storytelling around farmer welfare.

**Trend Data:** A 2023 FICCI report found that 65% of urban millennials are willing to pay a 20–30% premium for traceable and organic produce.

## **10. Government Schemes Boosting Agri-FMCG**

Government policies support plays a vital role in agri-FMCG acceleration.

### **Relevant Programs:**

- **PM Formalisation of Micro Food Processing Enterprises (PMFME):** Provides subsidies and training for micro units to develop branded, packaged food products.
- **Operation Greens:** Supports price stabilization for perishable produce (TOP crops – Tomato, Onion, Potato) and promotes value-added product development.
- **Agri Infra Fund:** Helps startups and FPOs build infrastructure for storage, grading, processing and branding of perishable agri-produce.

## **11. Export Potential and Global Branding**

Branded fresh agri-products are increasingly targeting international markets, supported by traceability, certifications and GI tags.

### Case Study: APEDA's Agri Export Zones

India's Agricultural and Processed Food Products Export Development Authority (APEDA) promotes export of GI-tagged products like Basmati rice, Banaganapalle mangoes and Darjeeling tea with dedicated zones and branding campaigns.

### Global Example:

India's Alphonso mangoes are now barcoded and traceable when exported to the Middle East and Europe, ensuring consumer confidence abroad.

### Top 10 Agri-FMCG Startups in India

Startup Name	Product Focus	Technology Used	Operational Regions	Funding & Support
<b>Ninjacart</b>	Fresh fruits & vegetables	AI, IoT, real-time logistics	Pan-India	Backed by Walmart and Flipkart
<b>WayCool</b>	Fresh produce, staples	Blockchain, AI, IoT	South India	\$117M raised; NABARD & Lightrock-supported
<b>Farmizen</b>	Organic vegetables, micro-farms	Mobile app, subscription model	Bengaluru, Hyderabad	Angel-funded; consumer-driven
<b>Agrowave</b>	Mobile agri pickup logistics	AI-based route planning	North & Central India	Backed by IIT-Delhi & government grants
<b>Otipy</b>	Community-based fresh produce	Predictive demand analytics	Delhi-NCR, Tier-2 cities	Backed by Westbridge Capital
<b>Innoterra</b>	Banana-based value products	Processing tech, supply-chain AI	Maharashtra, Kerala	Switzerland-based AgriTech player
<b>Ecozen</b>	Solar-powered cold chains	IoT, solar refrigeration	Rural Maharashtra, Telangana	Backed by Bill & Melinda Gates Foundation
<b>Sahyadri Farms</b>	Branded grapes, tomatoes	Traceability, GI tagging	Maharashtra	Farmer co-op model; export-focused
<b>Happy Roots</b>	Snacks from surplus produce	Circular economy design	Maharashtra & Gujarat	Women-led FPO initiative
<b>Fresho (BigBasket)</b>	Packaged fruits & vegetables	QR code traceability, cold logistics	Metro cities	Part of BigBasket-Tata ecosystem

### Conclusion

The lines between agri-commodities and consumer goods are blurring fast. Fresh fruits, vegetables and agri-products are being repackaged, repositioned and rediscovered as fast-moving goods that can compete on quality, convenience and brand value. As India urbanizes and consumers become more quality-conscious, this fresh FMCG revolution is poised to reshape how we shop, eat and connect with our farmers.