Agriculture Market Analysis

# 1. Overall

* The agriculture sector is the primary livelihood for about 58% of India's population.
* Contribution to the GDP has reduced to 20% but agricultural production has grown.
* This has made the country self-sufficient food and an important exporter of agricultural products.
* India is self-sufficient in rice and wheat production. It is one of the world’s largest producers of both. Major growing states are Punjab, Haryana, Uttar Pradesh, and West Bengal.
* India struggles with oilseeds, fruits etc as there isn’t consistent supply throughout the year due and issues with storage, transportation etc.
* Small-time farmers in India first sell their surplus produce to the village moneylenders and traders at a very low price. More than 50 per cent of the agricultural produce is sold in these village markets in the absence of organised markets.
* Middlemen influence the prices in local markets by controlling the supply, leading to farmers receiving lower prices for their produce. Small farmers do not have direct access to wholesale markets, where better prices can be obtained. Middlemen bridge this gap but at the cost of significant margins
* They manipulate prices and control the market, which can exploit both farmers and consumers.

# 2. Telangana

* 37.25% of land in telangana is under cultivation.
* Major crops are rice, maize, cotton, pulses.
* Telangana has the highest growth rate for paddy in the country at 99%, as per central government report and is the most profitable.
* Telangana's top exports include cotton, spices, cereals and meat.
* Telangana had almost 40% increase in agricultural exports between 2022-2023.
* This is due to innovative farming methods, improved cold storage facilities.
* Cultivation of exotic and non- native fruits and vegetables could show promise.
* Yet the farmers regularly face losses.

# 3. Dharwar

* Major crops are jowar, wheat, pulses etc
* Majority exports are cotton, jowar and alphonso mangoes.
* APMC (Agricultural Produce Market Committee) Markets**:** Dharwad has APMC markets where farmers sell their produce. These markets are crucial for price discovery and ensuring that farmers get fair prices.
* Farmers often rely on APMC markets for selling their produce
* Crops like tomatoes, onions and brinjal are only sold locally or within the state.

# 4. Kharif Crops

* Paddy, maize, cotton, groundnut, sugarcane, pulses
* Monsoon crops
* High-Value Crops: Cash crops like cotton and soybean are be highly profitable when there is strong market demand.
* Paddy is supported by the government through Minimum Support Prices (MSP). Farmers often achieve consistent returns
* Monsoon Dependency: Kharif crops are highly dependent on the monsoon. Delayed onset, erratic rainfall, or drought, severely impacts yields.
* Market Volatility: Prices for crops like cotton and soybeans are highly volatile, influenced by global market trends. Sudden price drops lead to significant losses for farmers.

# 5. Rabi

* Wheat, barley, gram, potato
* Less Monsoon Dependency: Rabi crops are less dependent on monsoon rains and rely on irrigation. This makes their production relatively stable compared to Kharif crops.
* Input Costs: are high due to fertilizers, irrigation etc.
* Market Saturation: Overproduction of staple crops like wheat can lead to market saturation, causing prices to drop. Without proper storage, farmers may be forced to sell at lower prices immediately after harvest.

# 6. Short-life crops

* Vegetables: Tomato, Brinjal, Okra, Green Chilli, Leafy Vegetables
* Fruits: Mango, Banana, Papaya, Guava
* Flowers: Rose, Jasmine, Marigold
* High Profit Potential: can be highly profitable, when there is strong local demand
* High Risk of Spoilage: are highly perishable, leading to significant post-harvest losses if not sold quickly. Poor storage and transportation facilities exacerbate these losses.
* Price Volatility: Prices for vegetables and fruits can be extremely volatile, often dropping sharply when there is a glut in the market. Leading to farmers selling their produce at a loss.
* Limited Export Potential: primarily consumed domestically due to their perishable nature. However, some fruits like mangoes are exported to other countries where they fetch premium prices.

# 7. Long-life crops

* Cereals: Rice, Maize, Sorghum
* Pulses: Tur, Green Gram, Black Gram
* Oilseeds: Groundnut, Sunflower, Castor
* Stable Returns: Long-life crops generally provide more stable returns, especially when supported by MSP (Minimum Support Price).
* Significant Export Contribution: Telangana contributes significantly to India's exports of rice, cotton, and pulses.

# 8. What the market needs right now

* Transportation: Upgraded logistics and transportation networks to ensure timely delivery and reduce costs.
* Digital Platforms: Enhanced digital tools for weather forecasting, market information, and farm management.
* Market Linkages: Support for establishing direct market linkages and cooperative models to enhance farmers' access to markets and fair prices.
* Price Stabilization: Mechanisms to stabilize prices and protect farmers from extreme market fluctuations.
* Contract farming involves an agreement between farmers and buyers before the crop is sown, with pre-agreed prices, quantities, and quality standards. This reduces price risk for farmers
* Futures markets allow farmers to hedge against price fluctuations by locking in prices for their crops before harvest through commodity exchanges

# 9. Examples

i. Tomato trade between a Telangana farmer and the market

Scenario 1: With a Middleman

A farmer lacks direct access to wholesale markets so he relies on a middleman.

The middleman negotiates a price with the farmer lower than the market rate because he needs to cover costs and make a profit. Let's say the middleman buys the tomatoes at ₹10 per kg.

He sells the tomatoes to wholesalers at a higher price, say ₹20 per kg.

The middleman earns a profit margin, ₹10 per kg, after deducting other costs.

Scenario 2: Without a Middleman

Using SureCrop app the farmer can find out the market situation, find a buyer directly in the wholesale market and sell the tomatoes at ₹20 per kilogram.

After deducting ₹5 per kg for costs, the net profit would be ₹15 per kilogram

### Comparison of Profits

If they sell 1000kg tomatoes,

With Middleman:

* + Farmer's earnings: ₹10,000 (₹10 per kg).
  + Middleman’s profit: ₹10,000 (₹10 per kg).

Without Middleman:

* + Farmer's earnings: ₹15,000 (₹15 per kg).

ii. Jowar and Guava trade from Dharwar to Hyderabad

Jowar prices

Dharwad: ₹2,000 - ₹2,800 per quintal

Hyderabad: ₹2,200 - ₹3,000 per quintal

Guava

Dharwad: ₹25 - ₹50 per kilogram

Hyderabad: ₹30 - ₹60 per kilogram

A small farmer in Dharwar with no market access will have to sell locally for low price whereas using an app like CropSure he can expand his business scope to cities like hyderabad where he can compare prices and sell for higher profit.

iii. Smart Contracts

Smart contracts are self-executing contracts with the terms of the agreement directly written into code. They run on blockchain technology, which ensures transparency, security, and automation.

Smart contracts can be programmed to ensure that farmers receive a fixed price for their produce or designed to adjust payments based on predefined conditions, such as market indices or commodity prices, protecting farmers from sudden market drops.

Buyers get guaranteed quality and compliance, reduced costs

For example, A Smart Contract for Wheat Sales

A farmer and a buyer enter into a smart contract specifying the price of wheat, delivery schedule, quality standards, and payment terms. If the crop produces less yield due to harsh rain or sudden drop in market price, the farmer is protected from facing huge losses

Without any protection, now Telangana farmers battle crop damage and insurance woes