



INNOVATION. AUTOMATION. ANALYTICS

Exploring Agri-Market Insights Price Trends and Market Intelligence

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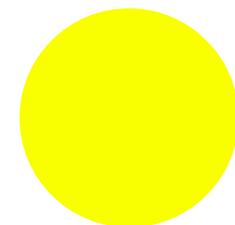
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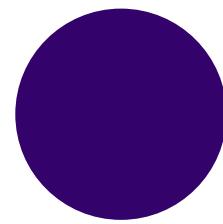
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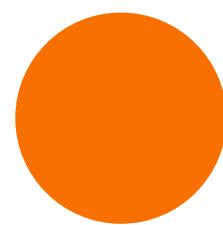
COLOR PALETTE



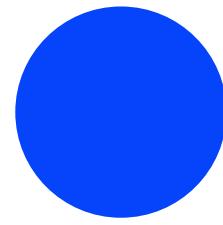
KEY METRICS OR TOP PERFORMERS
(E.G., HIGHEST REVENUE BARS AVERAGES)



TRENDS AND TIME-SERIES DATA
(E.G., GENRE REVENUE OVER YEARS)



CATEGORICAL SEGMENTS IN PIES/DISTRIBUTIONS
(E.G., GENRE SHARES)



RELATIONSHIPS AND CORRELATIONS
(E.G., RUNTIME VS. REVENUE LINES)

BUSINESS OBJECTIVE

- Despite Maharashtra being one of India's largest agricultural states, farmers face inconsistent income due to volatile market prices, seasonal oversupply, and lack of data-driven insights into which crops, grades, and markets yield the best returns.
- A startup exploring organic farming needs a clear, analytical understanding of which crops are most profitable, which markets are most stable, and how seasonal trends and supply volumes influence prices.
- Currently, decisions on crop selection, grading, and market targeting are based on intuition rather than insights, leading to revenue fluctuations and poor planning.

APPROACH TO PROVE BUSINESS OBJECTIVE

- The objective of this project is to perform Exploratory Data Analysis (EDA) on Agmarknet data for Maharashtra to identify profitable, stable, and sustainable opportunities in organic farming.
- Specifically, the analysis aims to:
- Evaluate crop-level profitability and volatility.
- Compare district and market-level performance across time.
- Understand the relationship between supply (arrivals) and price behavior.
- Assess grade-based pricing advantages for premium (organic) produce.
- Recommend suitable crops and markets for launching an organic farming venture.

WEB-SCRAPPING

- Data was taken by performing Web-Scraping

Web scraping is the process of extracting data from websites. It helps collect large amounts of real-time information for analysis.

- Fetch Web Page: The website responds with an HTML page containing the required data.
- Extracting Data: Using tools like BeautifulSoup specific information is extracted.
- Clean & Organize Data: Raw data is processed, structured, and converted into tables or datasets.
- Store Data: The cleaned data is stored in formats like CSV, Excel, or Database for future use.
- Analyze & Visualize: Finally, the data is analyzed with tools like Pandas, Matplotlib, or Power BI, helping farmers and businesses gain real insights.

INTERFACE OF WEBSITE



AgMarknet
Connecting Farmer to Market

Home Agmarknet Projects Price & Arrivals Price Trend Mobile App Reach Us Tender

Search PRICE/ARRIVALS COMMODITY STATE DISTRICT MARKET DATE FROM DATE TO Go

Price --Select-- --Select-- --Select-- --Select-- 01-Nov-2024 20-Aug-2025

AGMARKNET 11 Sep 2025 Wheat : Lokwan Gujarat Max Price: 2825 Min Price: 2250 | Wheat : Maharashtra 2189 Max Price: 3251 Min Price: 1920 | Wheat : Mill Quality Max Price: 3119

MARKET DAILY DATA ENTRY Dashboard COMMODITY-WISE GRAPH MARKET-WISE GRAPH

MARKET PROFILE UPDATE Today's Mandi Prices FOR MORE QUERIES ON PRICES AND ARRIVALS CLICK HERE

DATA PREPARATION

Loaded Data: Imported Agmarknet dataset using pandas and inspected structure & column types.

Cleaned Data: Removed duplicates, handled missing values, fixed data types, and parsed dates correctly.

Created Features: Extracted Month and Year from Reported Date column

Standardized & Filled: Renamed columns consistently and filled missing values with variety-wise means/medians.

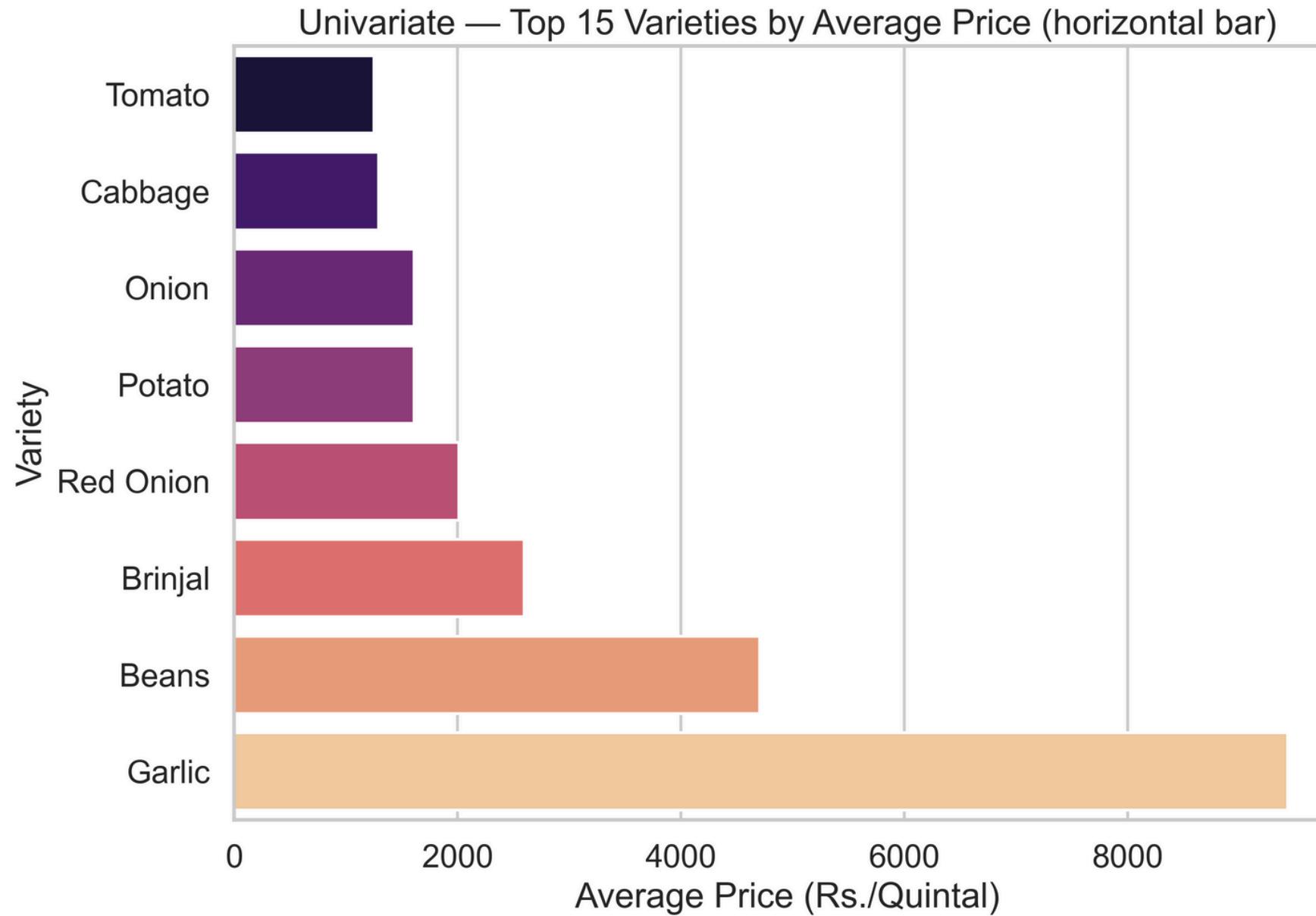
Structured for EDA: Aggregated data by Month, Variety, and District to prepare for heatmaps, bar charts & trend analysis.

	State Name	District Name	Market Name	Variety	Group	Arrivals (Tonnes)	Min Price (Rs./Quintal)	Max Price (Rs./Quintal)	Modal Price (Rs./Quintal)	Reported Date	Grade
0	Maharashtra	Ahmednagar	Rahata	Tomato	Vegetables	0.6	500	2100	1300	11 Jun 2025	Local
1	Maharashtra	Ahmednagar	Rahata	Tomato	Vegetables	0.8	2000	6000	4000	16 Aug 2025	Local
2	Maharashtra	Ahmednagar	Rahata	Tomato	Vegetables	0.9	200	500	350	31 Jan 2025	Local

	State Name	District Name	Market Name	Variety	Group	Arrivals (Tonnes)	Min Price (Rs./Quintal)	Max Price (Rs./Quintal)	Modal Price (Rs./Quintal)	Reported Date	Grade
0	Maharashtra	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2000	3500	2800	23 Mar 2025	Local
1	Maharashtra	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2500	2800	2600	19 Aug 2025	Local
2	Maharashtra	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2800	3500	3000	03 Jun 2025	Local

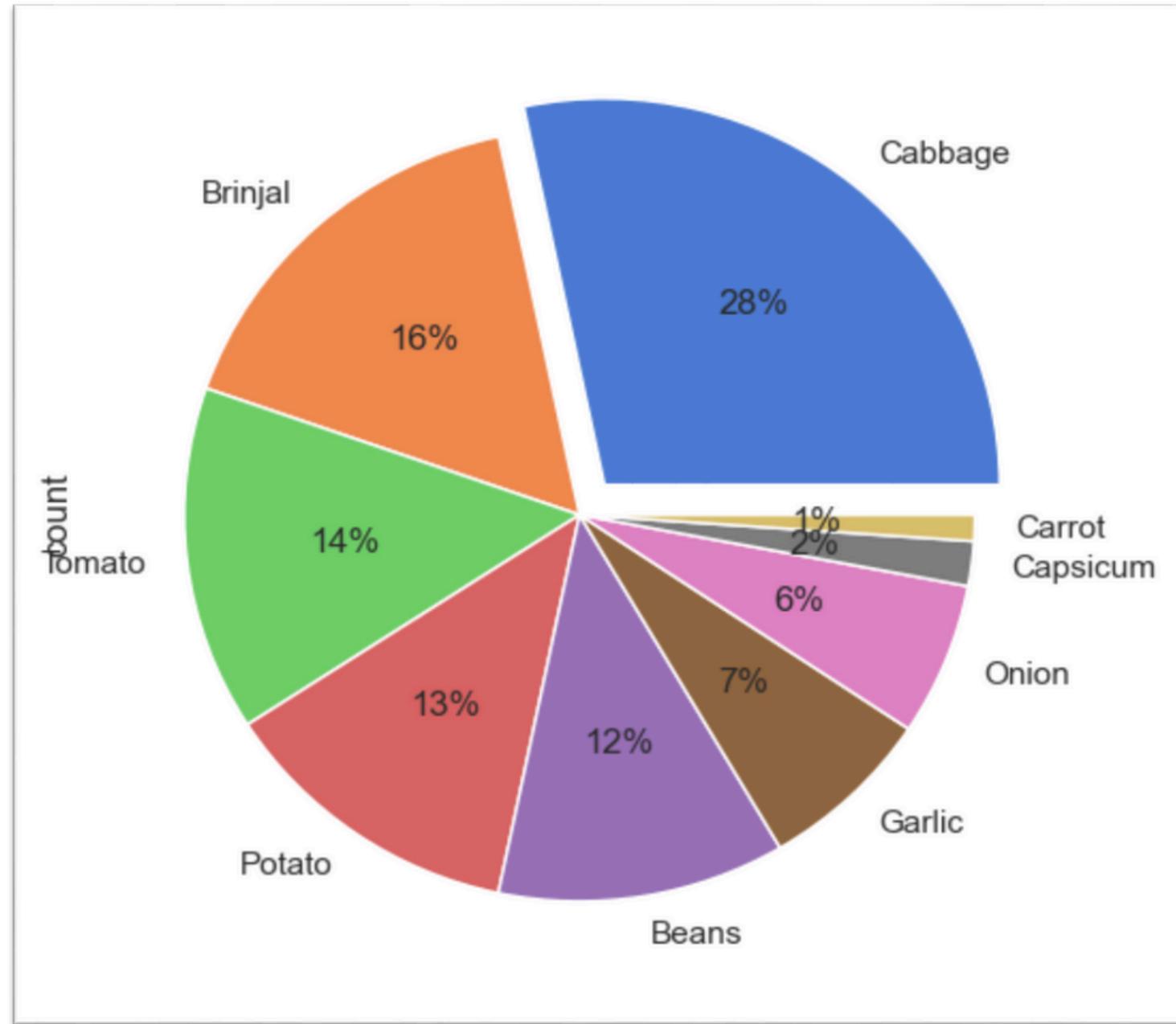
	District_Name	Market_Name	Variety	Group	Arrivals_Tonnes	Min_Price_Per_Quintal	Max_Price_Per_Quintal	Average_Price_Per_Quintal	Report_Date
0	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2000	3500	2800	2025-03-23
1	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2500	2800	2600	2025-08-19
2	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2800	3500	3000	2025-06-03
3	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2800	3500	3000	2025-04-12
4	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2800	3500	3000	2025-01-30

• Which Crops are Most Profitable for Organic Farming?



- **KEY INSIGHTS :**
- “Garlic & Red Onion: high-per-unit returns; consider premium/organic production.”
- “Cabbage & Potato: low per-unit price — better for volume farming or commodity strategies.”

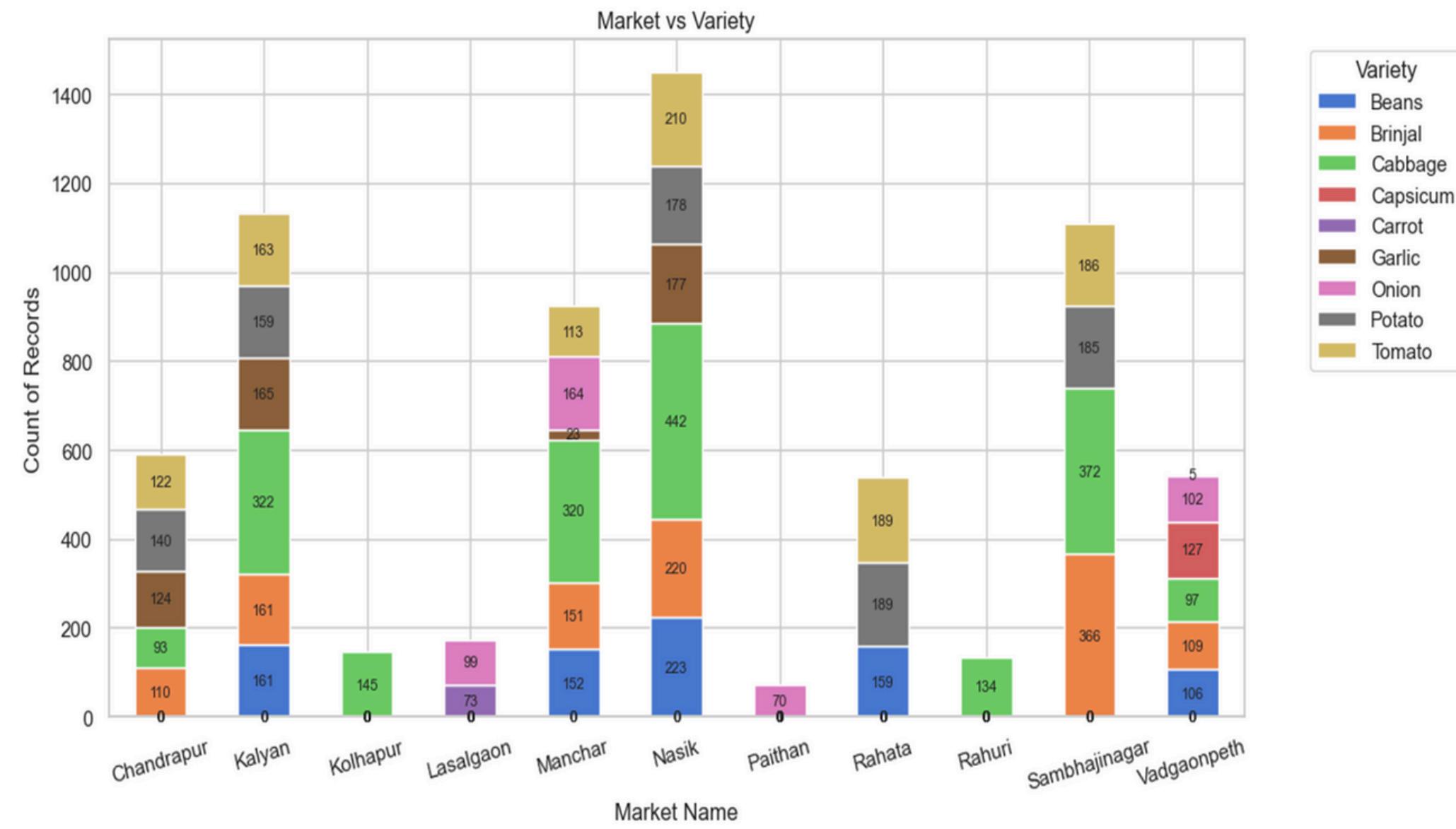
- Commodity wise Highest Market records?



- KEY INSIGHTS :

-

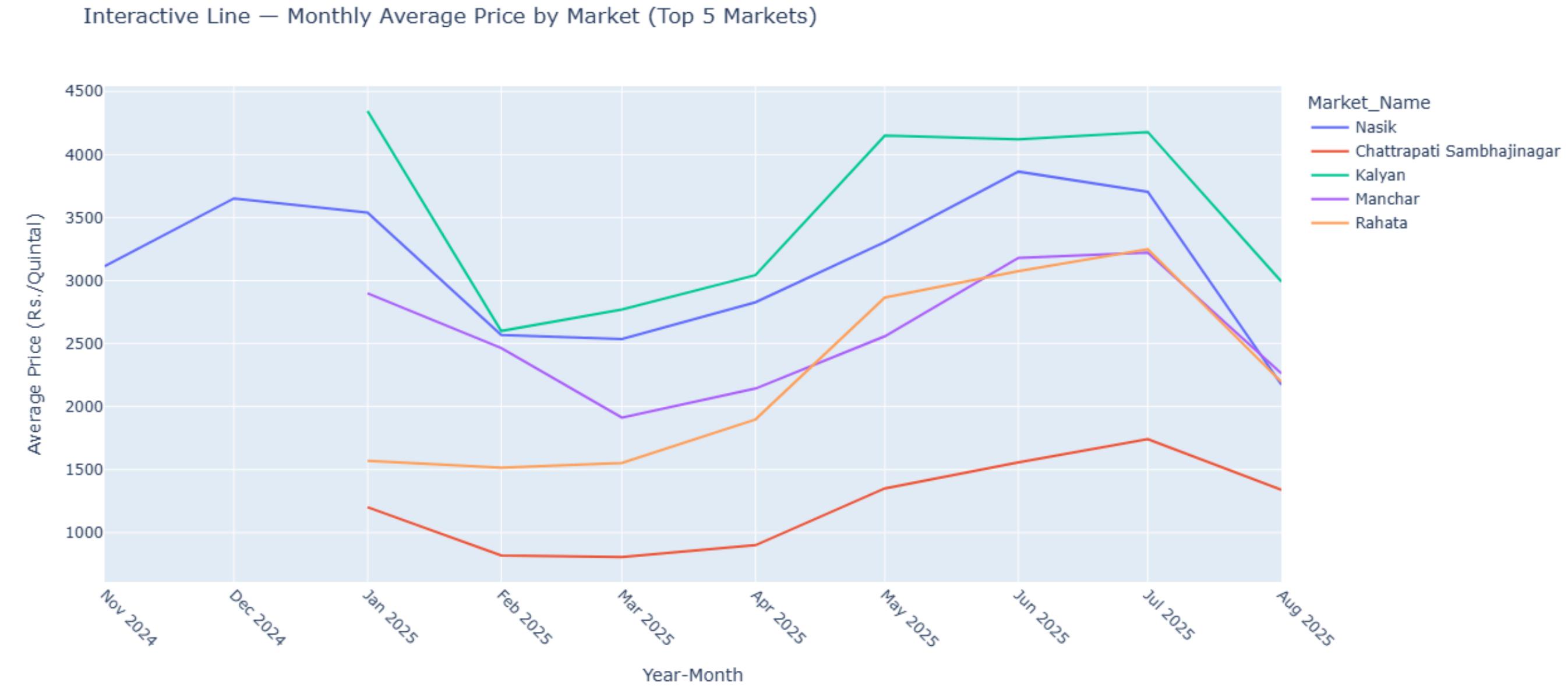
• Which Markets are Stable ?



• KEY INSIGHTS :

- Nashik is the Central Hub for almost every crop making it most diversified and dominant market
- Whereas Kolhapur, LasalGaon, Sambhajinagar are specialised markets for 2-3 crops only
- Cabbage, Beans, Tomato, Onion are the top four crops across Maharashtra markets.
-

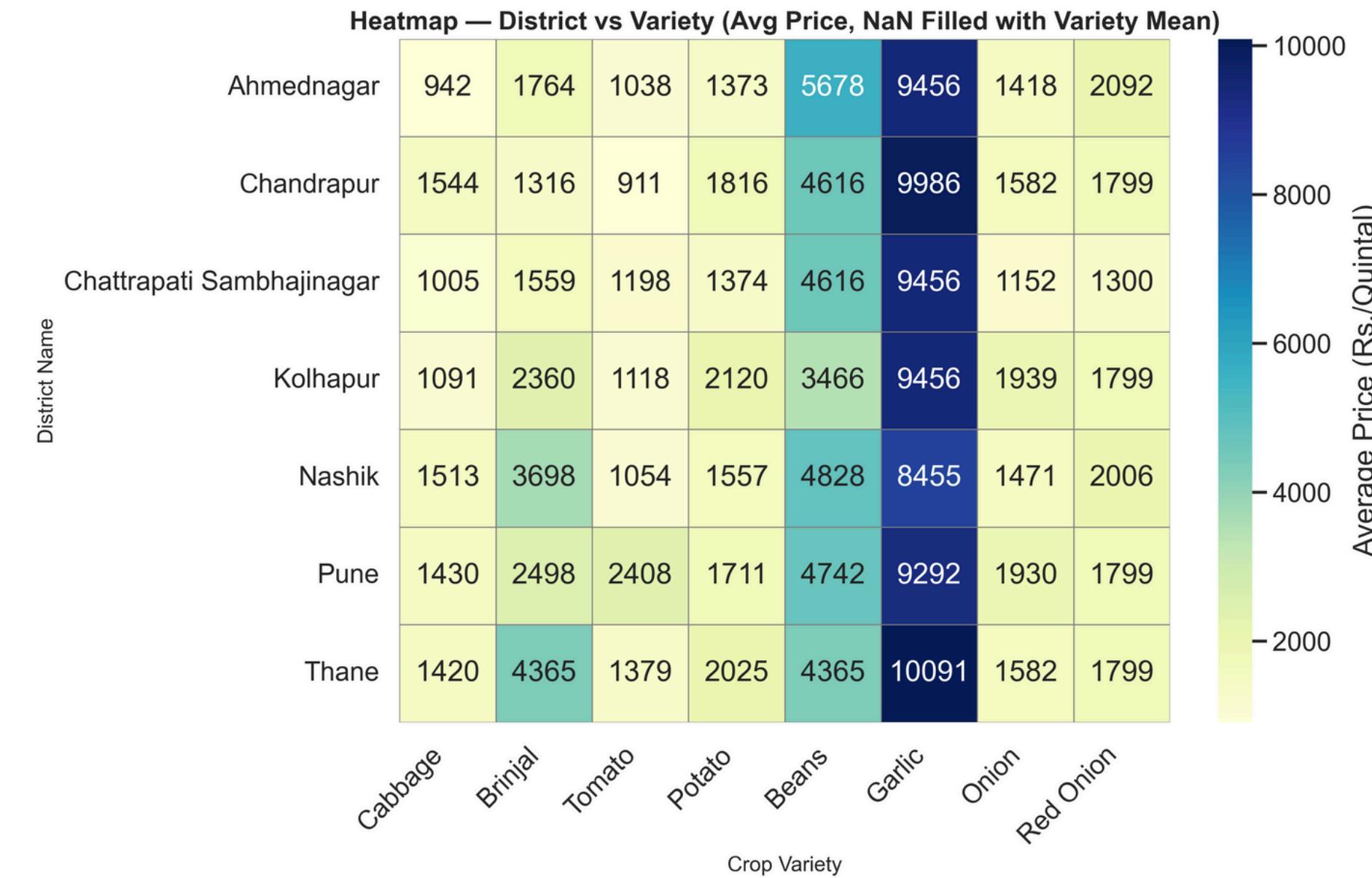
• Average Price According to Market ?



• KEY INSIGHTS :

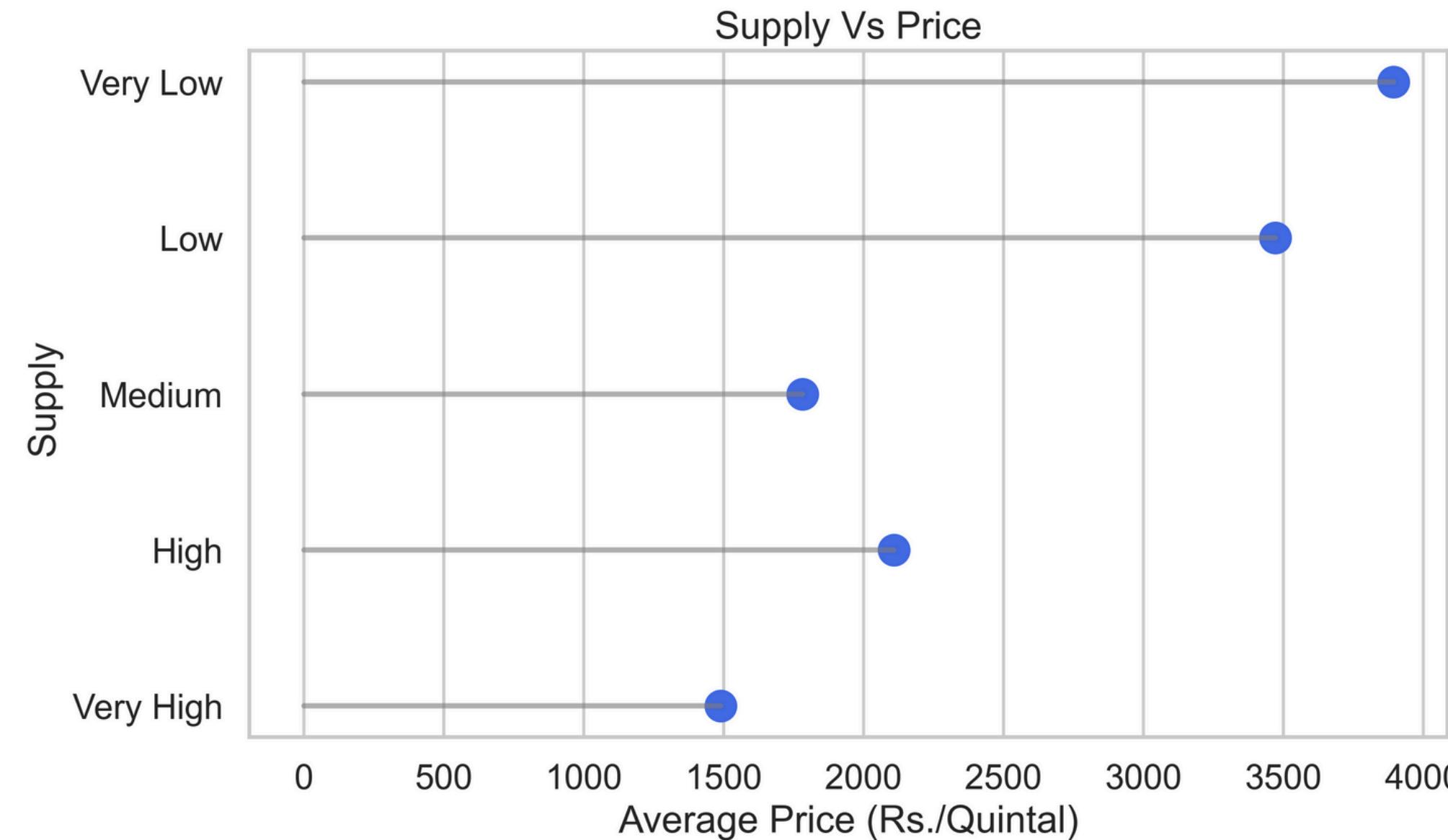
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• Which Districts gives Best Returns after Sales ?



- **KEY INSIGHTS :**
- Nashik & Pune are top-performing districts — perfect launch markets for organic farming due to high consumer demand and strong price realization.
- Low-value crops like Cabbage and Potato have limited organic premium scope — suitable for high-volume conventional farming.

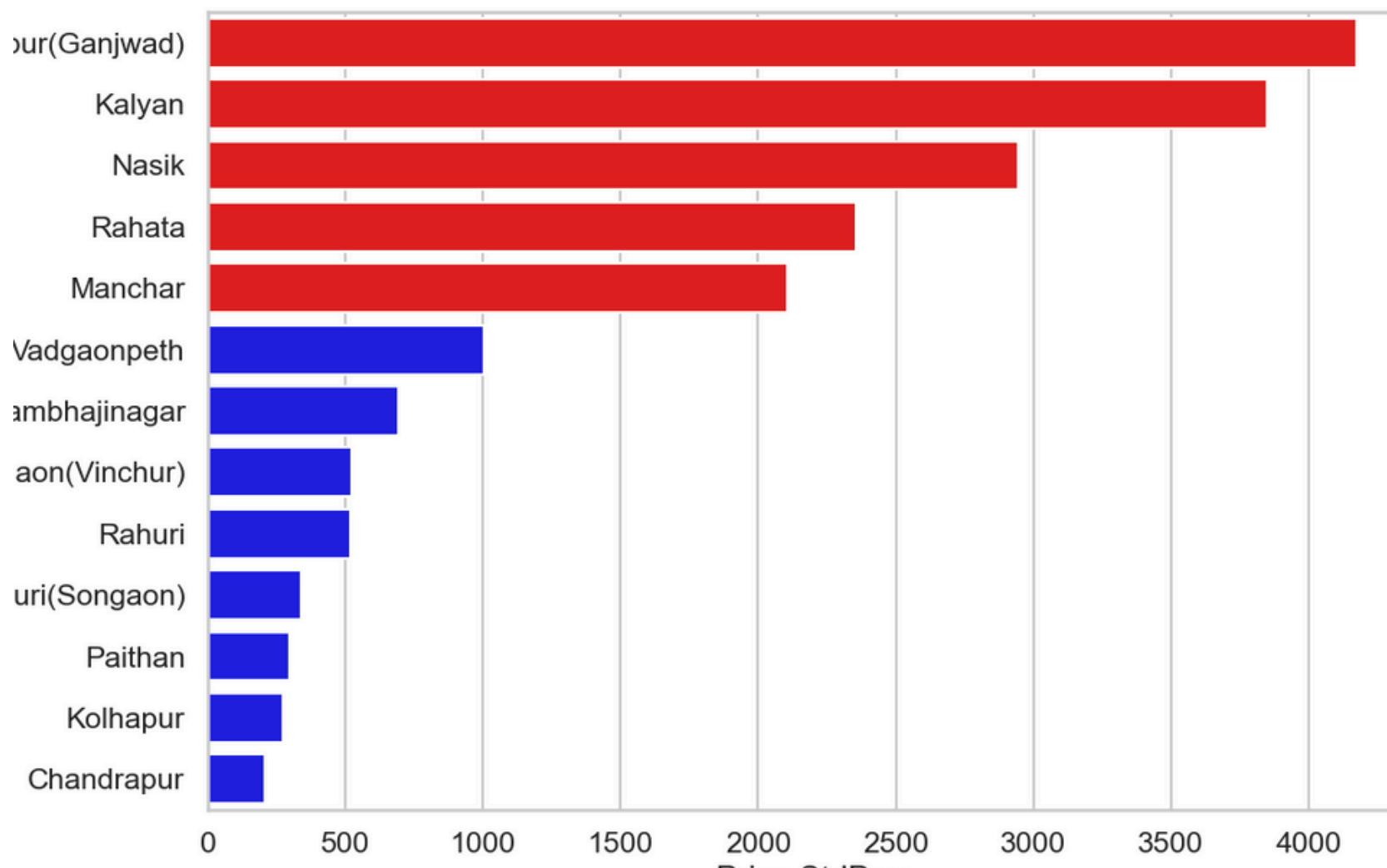
- Does Supply Impact Price ?



- KEY INSIGHTS :

-

• Which Markets are Risky and Stable ?

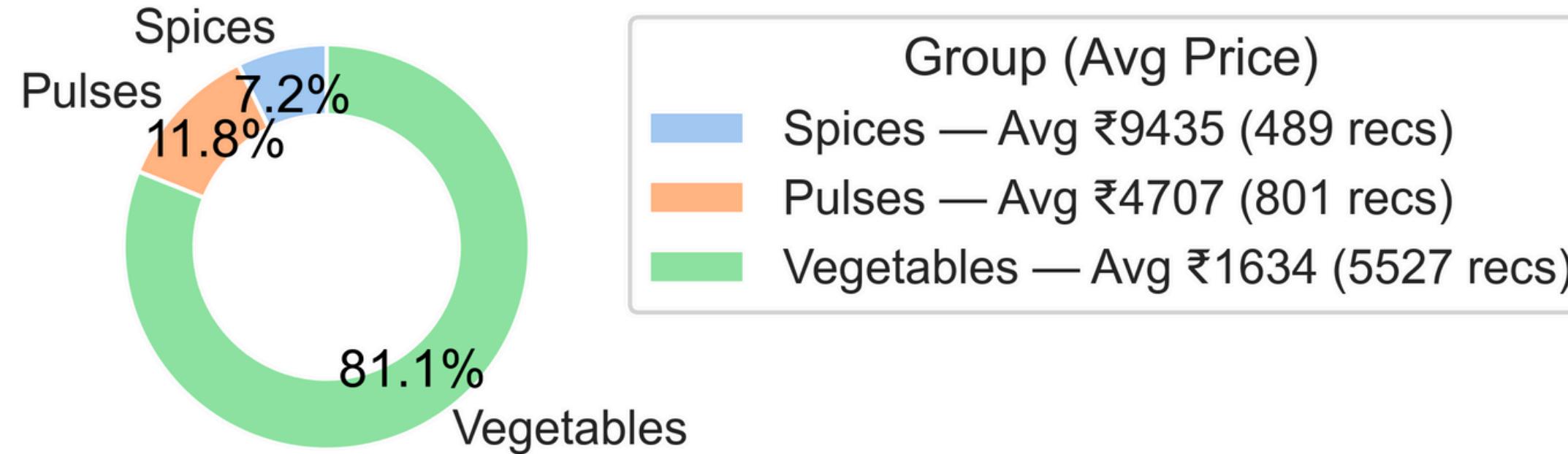


• KEY INSIGHTS :

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- **Analyzing the Distribution and Average Prices of Food Groups**

- Donut — Share of Records by Group
(Avg Price annotated in legend)



- **KEY INSIGHTS :**

-

CONCLUSION

- Animation, Action Adventure, and Fantasy genres lead revenue, suggesting prioritization for short films to maximize viewership.
- High IMDb ratings for these genres indicate audience appeal, guiding creators to blend creativity with proven success
- This data approach aids project development and can inspire future film schools to teach data literacy for strategic film planning.

THANK YOU

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