

Exploring Agri-Market Insights Price Trends and Market Intelligence

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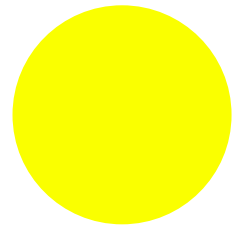
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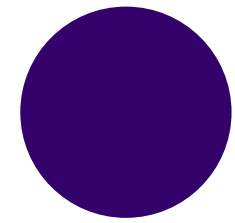
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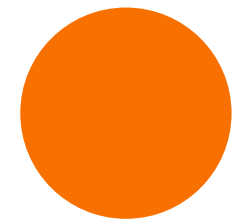
COLOR PALETTE



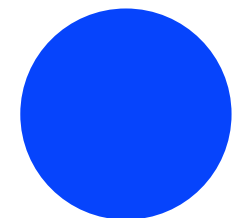
KEY METRICS OR TOP PERFORMERS
(E.G., HIGHEST REVENUE BARS AVERAGES)



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)



INNOVATION. AUTOMATION. ANALYTICS

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.**



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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-Scrapping

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



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.



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	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

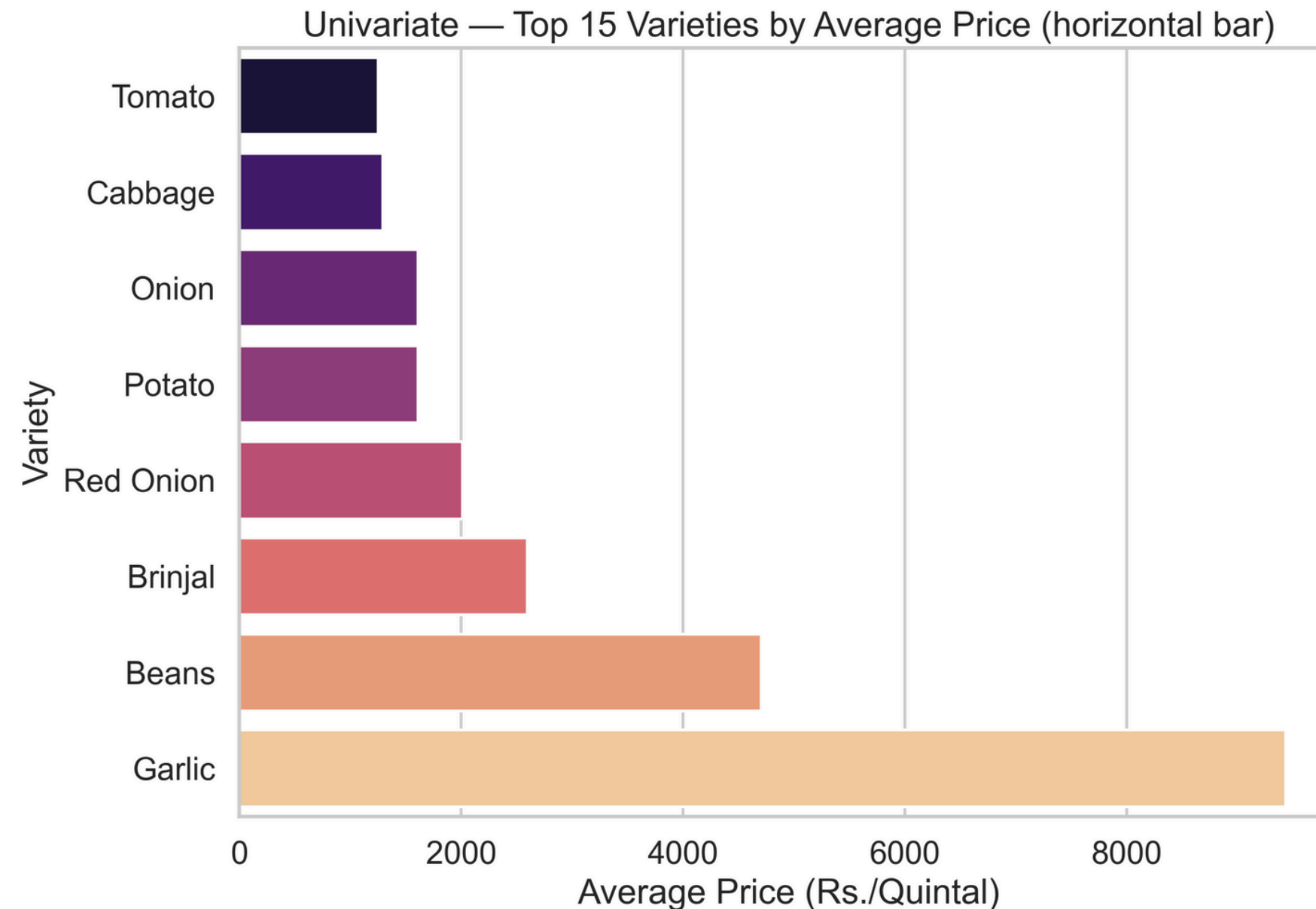
	State Name	District Name	Market Name	Variety	Group	Arrivals (Tonnes)	Min Price (Rs./Quintal)	Max Price (Rs./Quintal)	Modal Price (Rs./Quintal)	Reported Date	Grade
0	Maharashtra	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2000	3500	2800	23 Mar 2025	Local
1	Maharashtra	Kolhapur	Vadgaonpeth	Beans	Pulses	0.3	2500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



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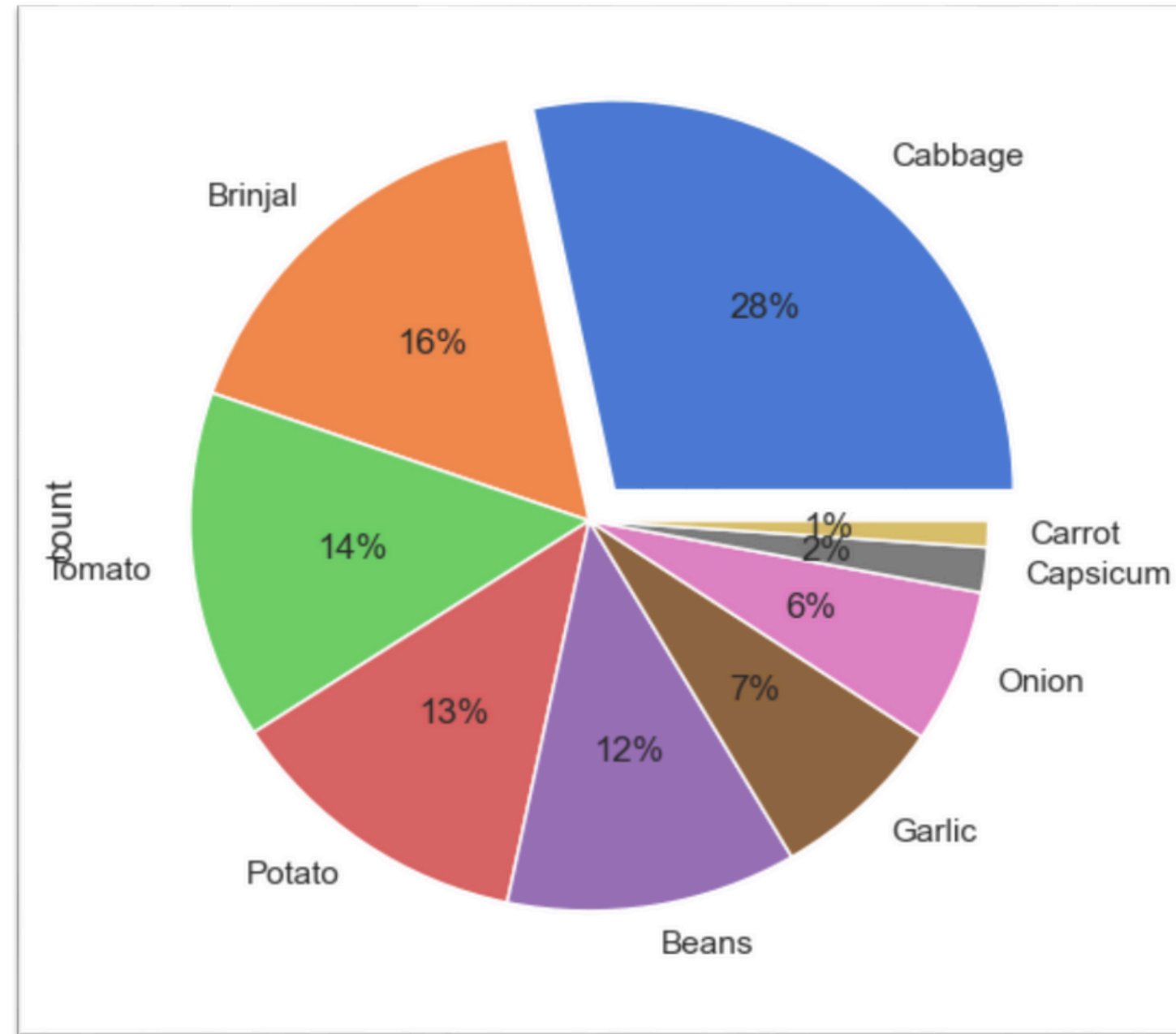
- **Which Crops are Most Profitable for Organic Farming?**



- **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.”

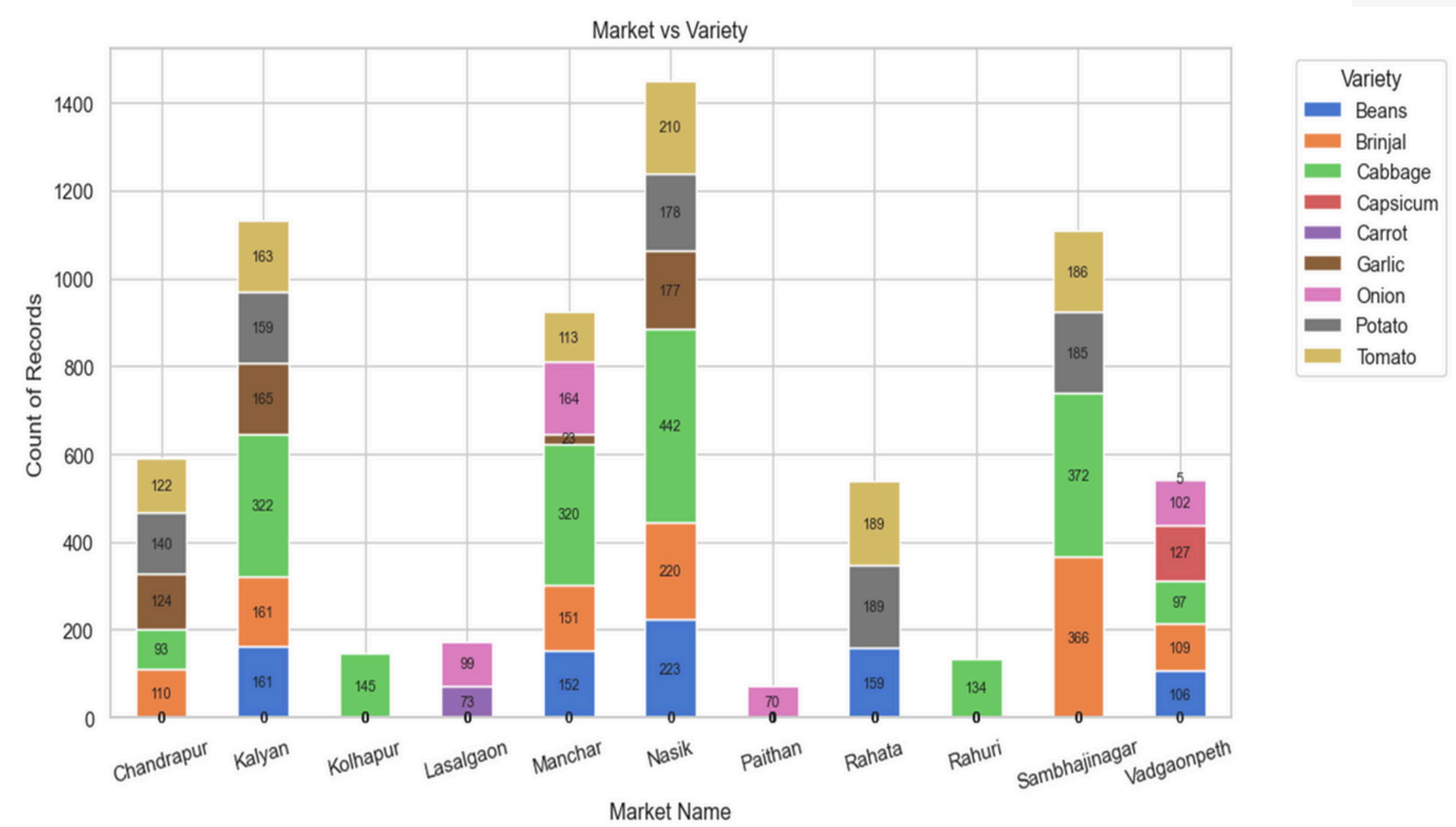
- **Commodity wise Highest Market records?**



- **KEY INSIGHTS :**

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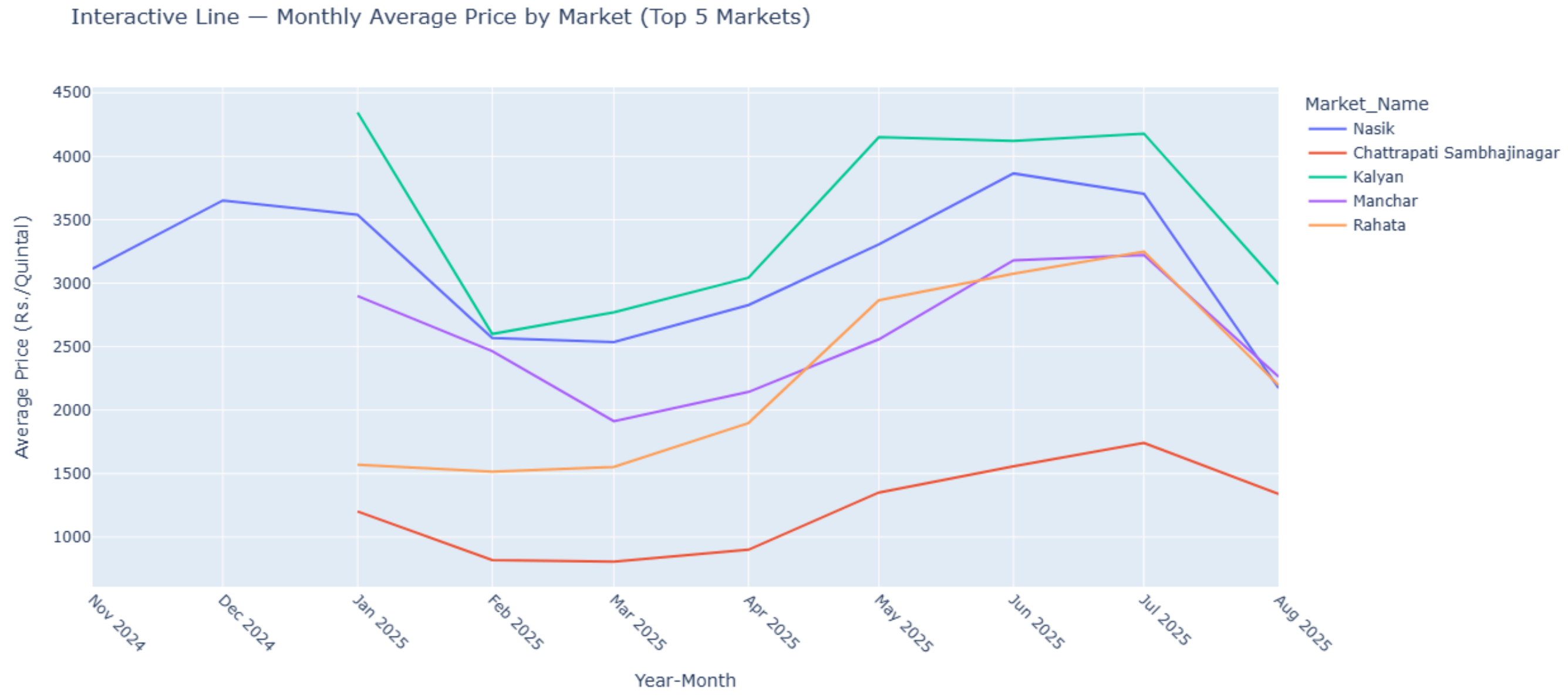
• Which Markets are Stable ?



• 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.
-

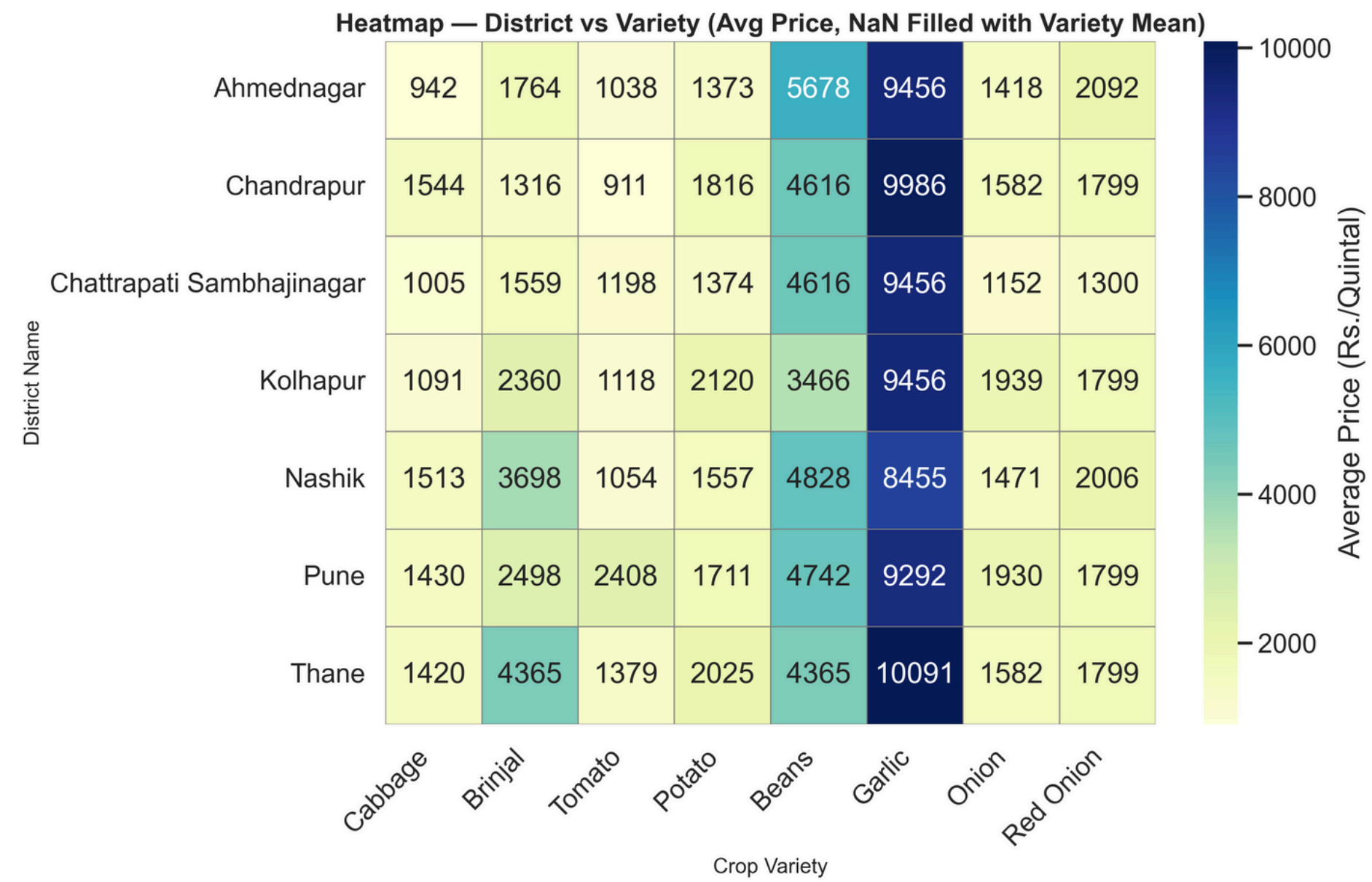
- **Average Price According to Market ?**



- **KEY INSIGHTS :**

-

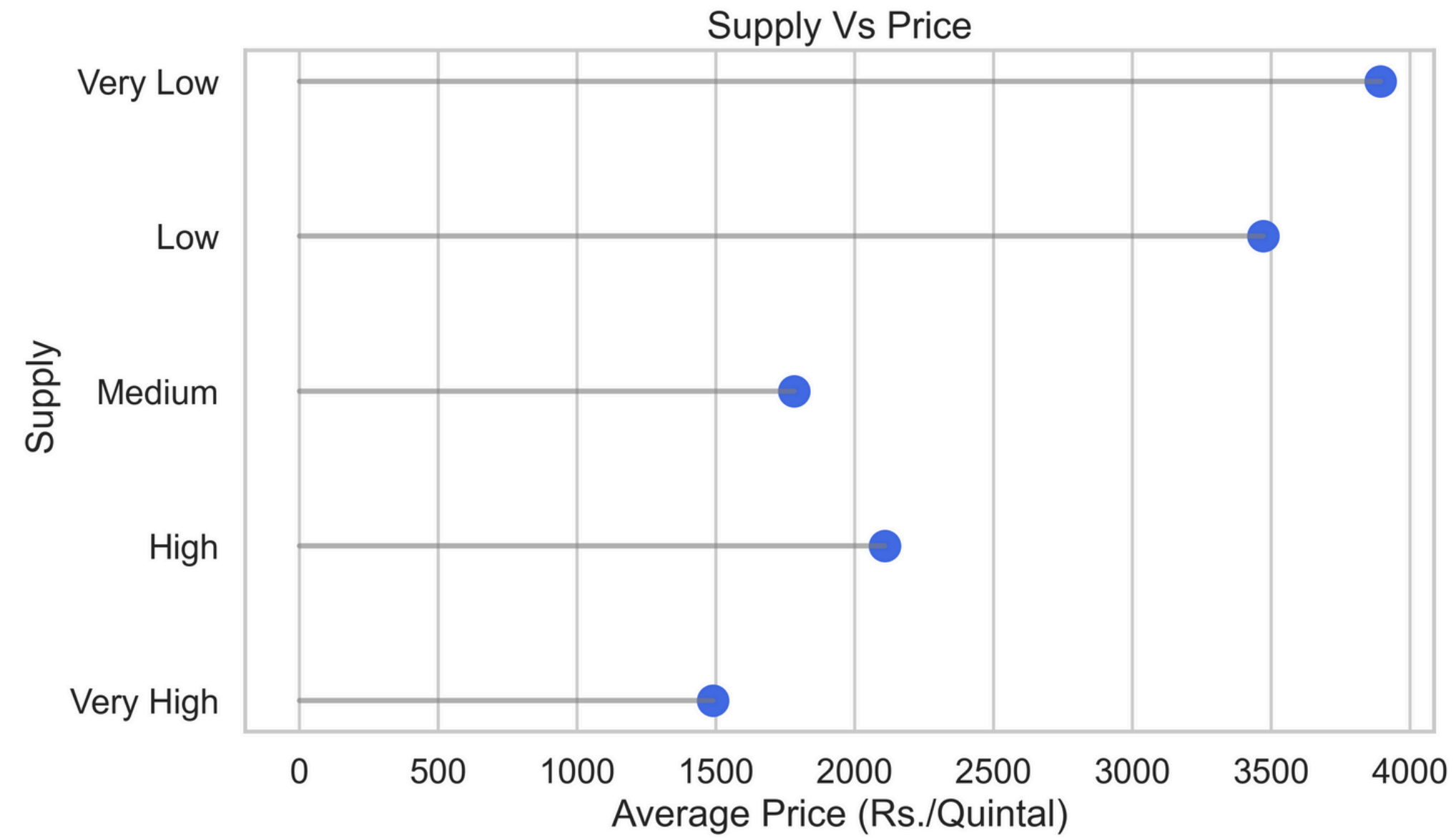
- Which Districts gives Best Returns after Sales ?



- 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.

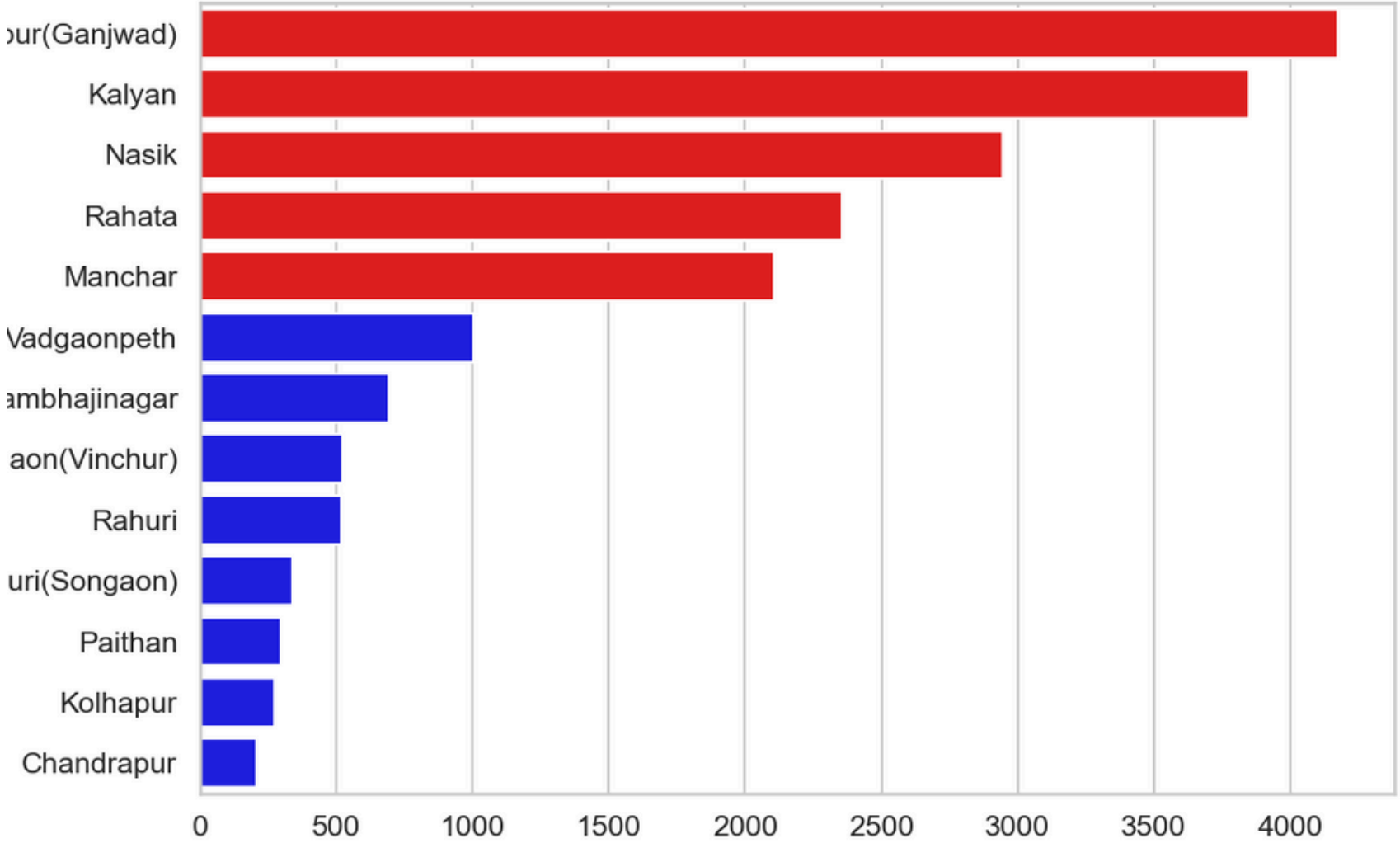
- **Does Supply Impact Price ?**



- **KEY INSIGHTS :**

-

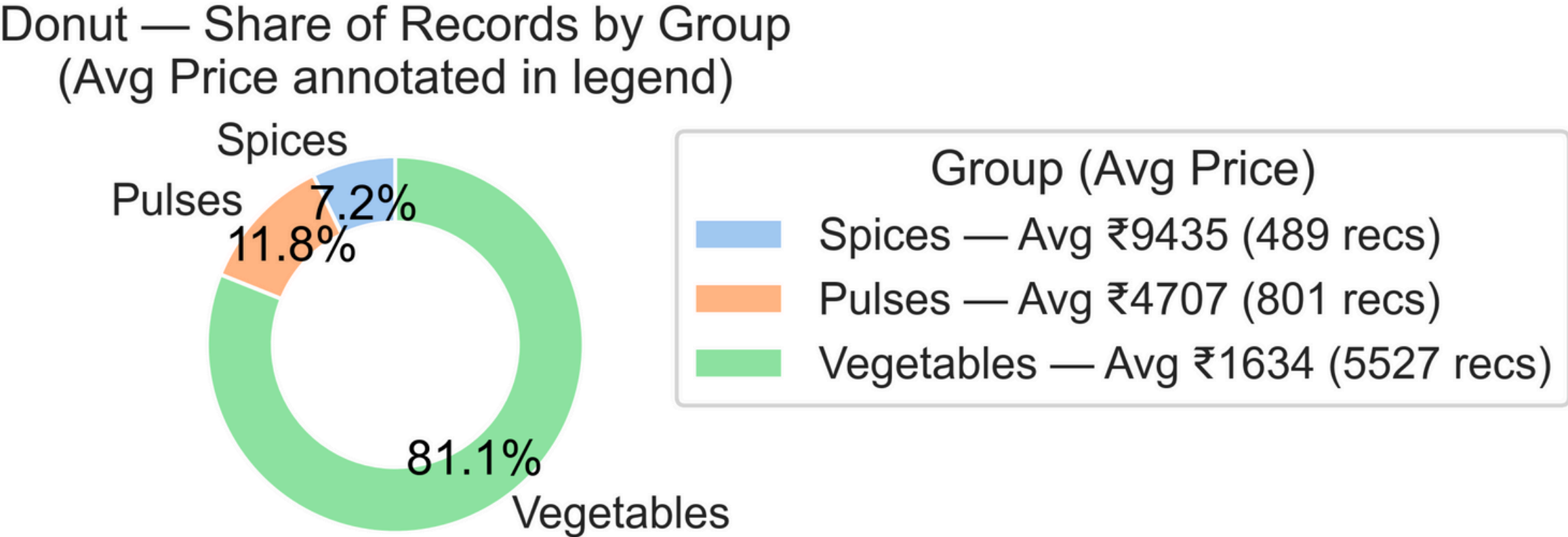
- Which Markets are Risky and Stable ?



- KEY INSIGHTS :

-

- Analyzing the Distribution and Average Prices of Food Groups
-



- KEY INSIGHTS :
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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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