



Analyzing Indian Agriculture with Power BI

Empowering Farmers with Data-Driven Insights

Indian Agriculture Insights



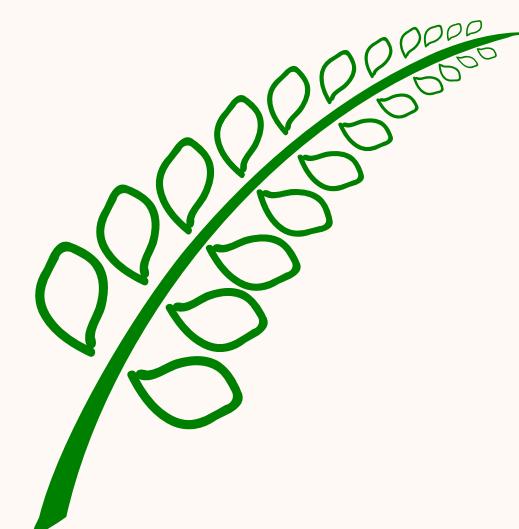
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PROFILE : DATA ANALYST INTERN
BATCH : MIP-DA-04

PROBLEM STATEMENT

This project aims to conduct a comprehensive analysis of Indian agriculture, focusing on district-wise and year-wise data. The dataset provides detailed information on various crops, their areas, production, and yields across different districts and years. The goal is to leverage Power BI to create interactive visualizations that uncover trends, patterns, and disparities in agricultural practices, enabling stakeholders to make informed decisions for sustainable farming and resource allocation.

DATA-DRIVEN INSIGHTS FOR
IMPROVEMENT.

VISUALIZE HARVEST TRENDS
EFFECTIVELY.



PROJECT OBJECTIVES

1. DATA EXPLORATION
2. DATA TRANSFORMATION
3. DATA MODELLING
4. VISUALISATION



"Farming is not a job, it's a way of life. It's not a profession, it's a calling. It's not a business, it's a passion."





Indian agriculture boasts a rich heritage dating back thousands of years, showcasing a remarkable diversity in crops, farming practices, and sustainable techniques. With its vast arable land, favorable climate conditions, and innovative farming methods, Indian agriculture plays a pivotal role in feeding a large population and contributing significantly to the nation's economy.



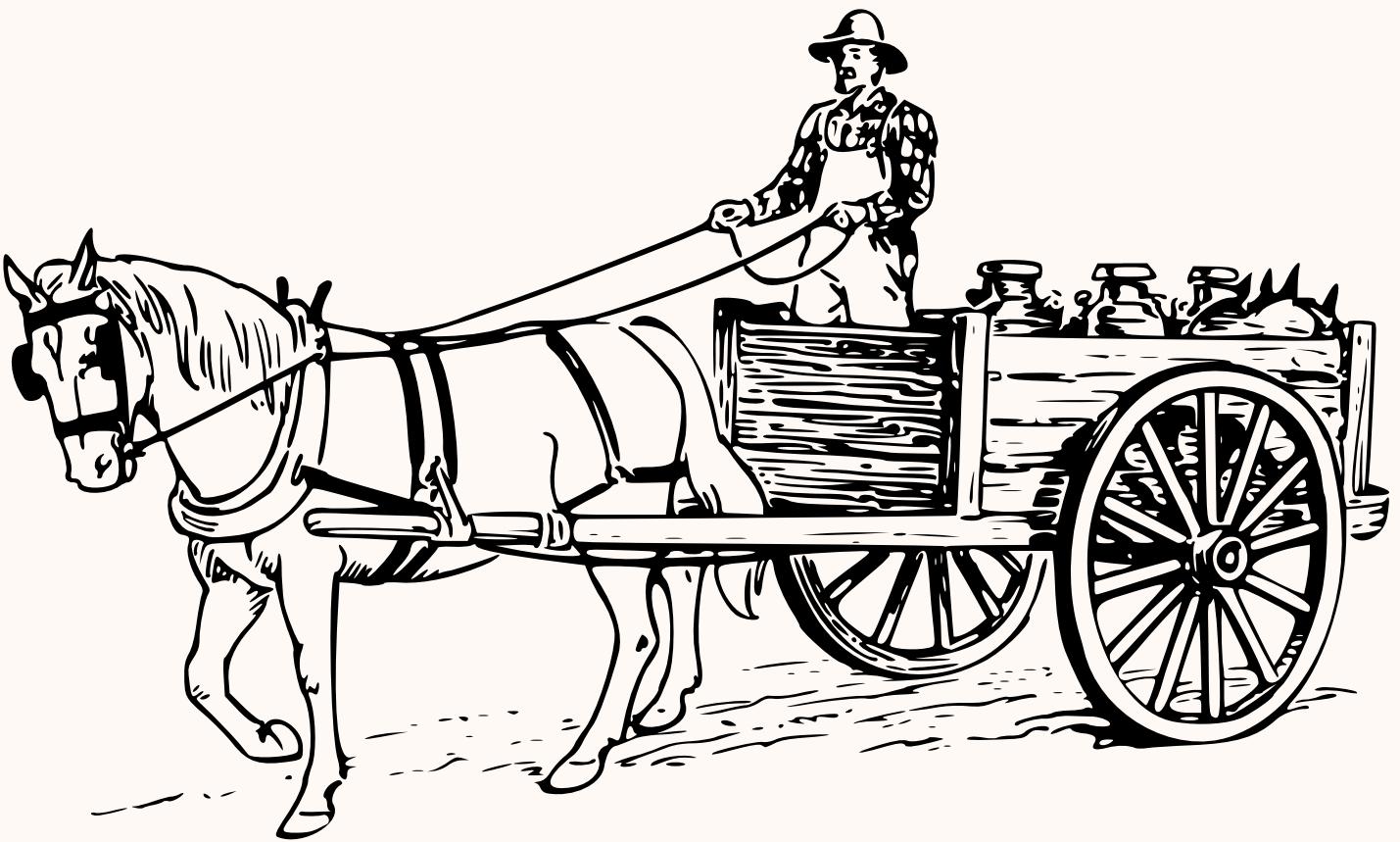
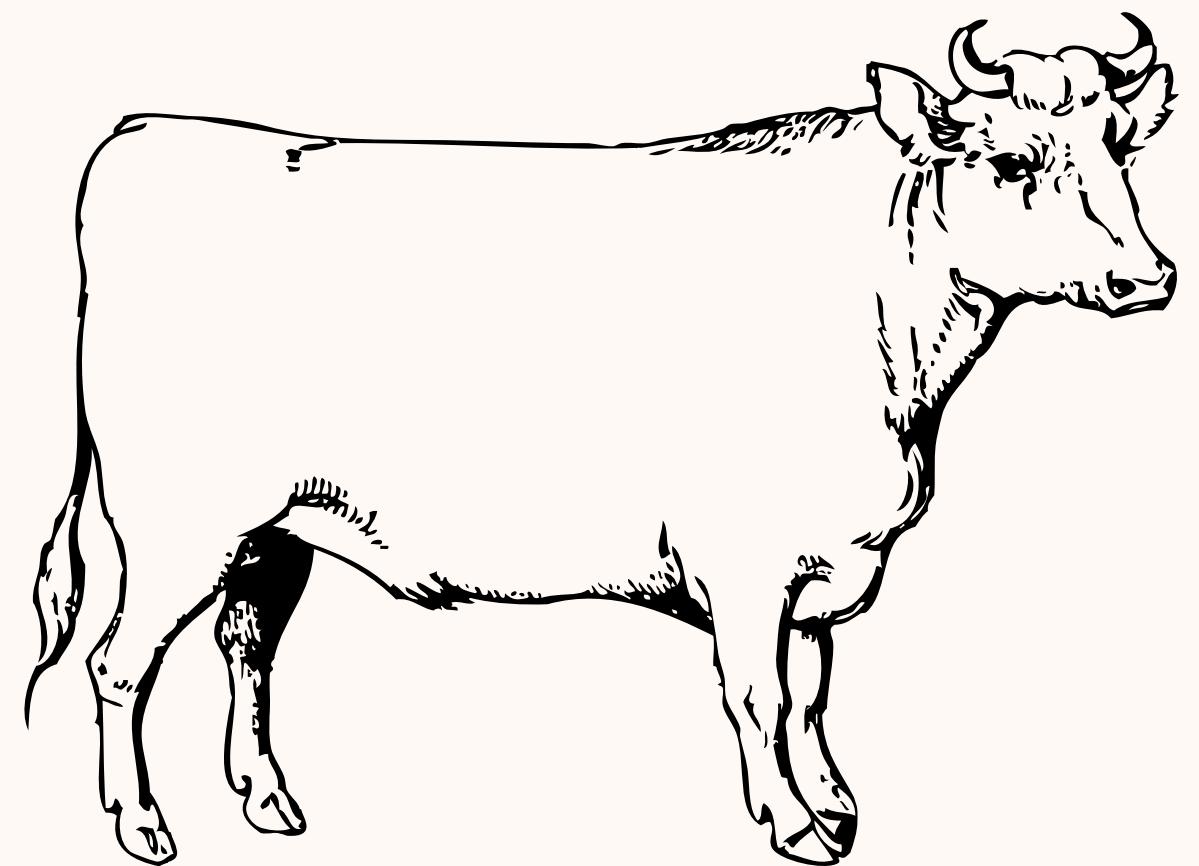


**VISUALISATION
TOOL :**

Power BI



LETS GO....



X ✓

Dist Code	Year	State Code	State Name	Dist Name	RICE AREA (1000 ha)	RICE PRODUCTION (1000 tons)	RICE YIELD (Kg per ha)	WHEAT AREA (1000 ha)	WHEAT PRODUCTK
93	1987	11	Tamil Nadu	The Nilgiris	2	3	1500	0	
93	1993	11	Tamil Nadu	The Nilgiris	2	3	1500	0	
93	2005	11	Tamil Nadu	The Nilgiris	1.43	4.72	3300.7	0	
94	1993	11	Tamil Nadu	Kanyakumari	42	142	3380.95	0	
95	1966	7	Maharashtra	Bombay	2	3	1500	0	
95	1967	7	Maharashtra	Bombay	2	3	1500	0	
95	1968	7	Maharashtra	Bombay	1.3	2	1538.46	0	
95	1969	7	Maharashtra	Bombay	1.4	2	1428.57	0	
95	1970	7	Maharashtra	Bombay	1.2	2.1	1750	0	
95	1971	7	Maharashtra	Bombay	1.5	2.3	1533.33	0	
95	1972	7	Maharashtra	Bombay	1.1	0.8	727.27	0	
95	1973	7	Maharashtra	Bombay	1.1	2.1	1909.09	0	
95	1974	7	Maharashtra	Bombay	1.1	1.8	1636.36	0	

- RABI SORGHUM AREA (1000 ha) - RABI SORGHUM PRODUCTION (1000 tons) - RABI SORGHUM YIELD (Kg per ha) - SORGHUM AREA (1000 ha) - SORGHUM PRODUCTION (1000 tons) - SORGHUM DAILY

0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
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0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0



DATA EXPLORATION....

data transformations

Created a single column table
to keep all the crops to
facilitate the visualisation

Queries [4]	
ICRISAT-District Level Da...	A8_C Crop name
crop selection	1 Rice
Key measures	2 Wheat
ICRISAT-District Level Da...	3 Karif Sorghum
	4 Rabi sorghum
	5 Sorghum
	6 Pearl Millet
	7 Maize
	8 Finger Millet
	9 Barley
	10 Chickpea
	11 Pigeonpea
	12 Minor Pulses
	13 Groundnut
	14 Sesamum
	15 Rapeseed and Mustard
	16 Safflower
	17 Castor
	18 Linseed
	19 Sunflower
	20 Soyabean
	21 Oilseeds
	22 Sugarcane

File Home Transform

Close & Apply New Recent Enter Data

Source Sources Data

Close New Query

Queries [4]

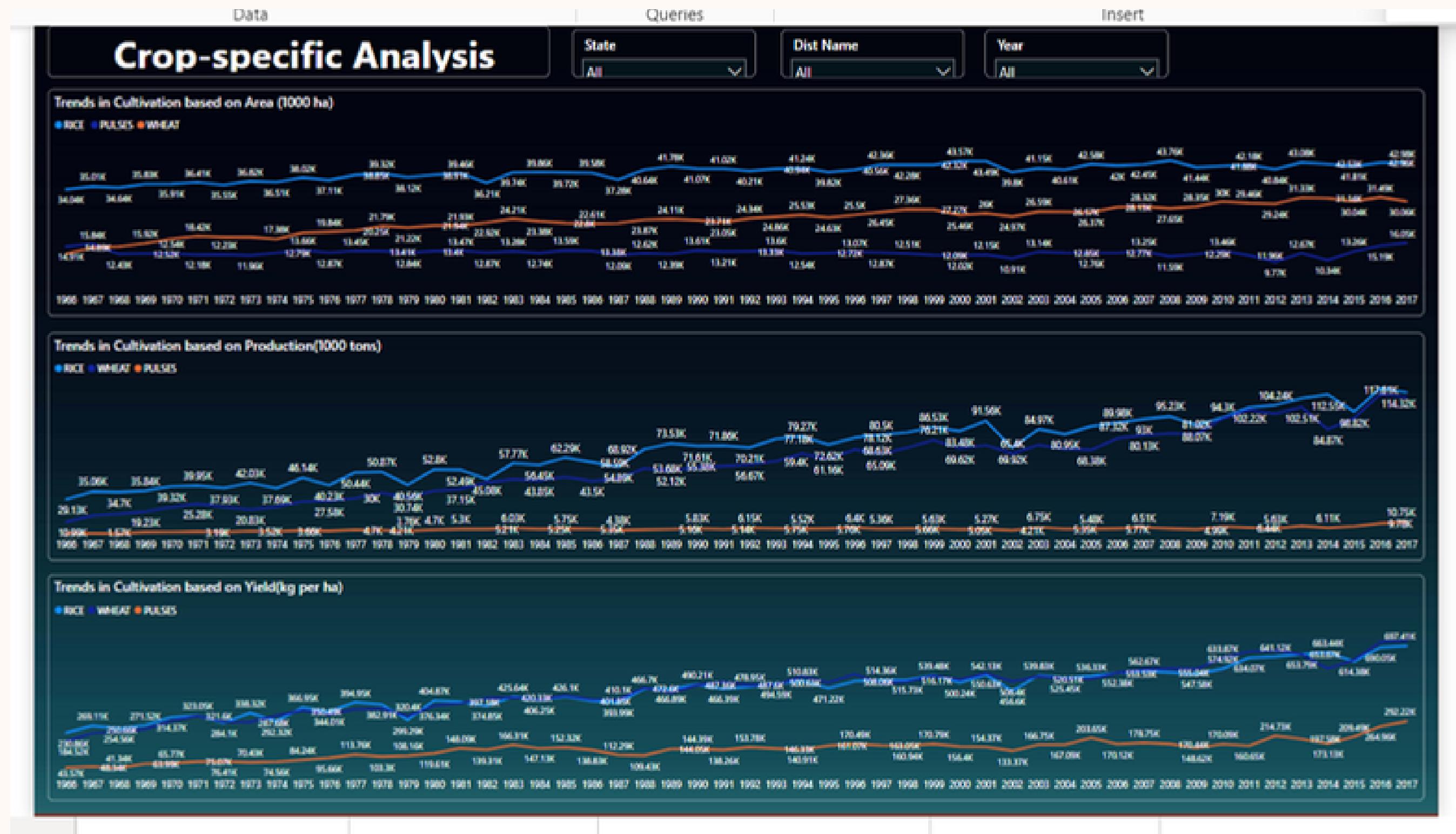
- ICRISAT-District Level Da...
- crop selection
- Key measures
- ICRISAT-District Level Da...

Created a
duplicate
table and
unpivoted all
crops columns

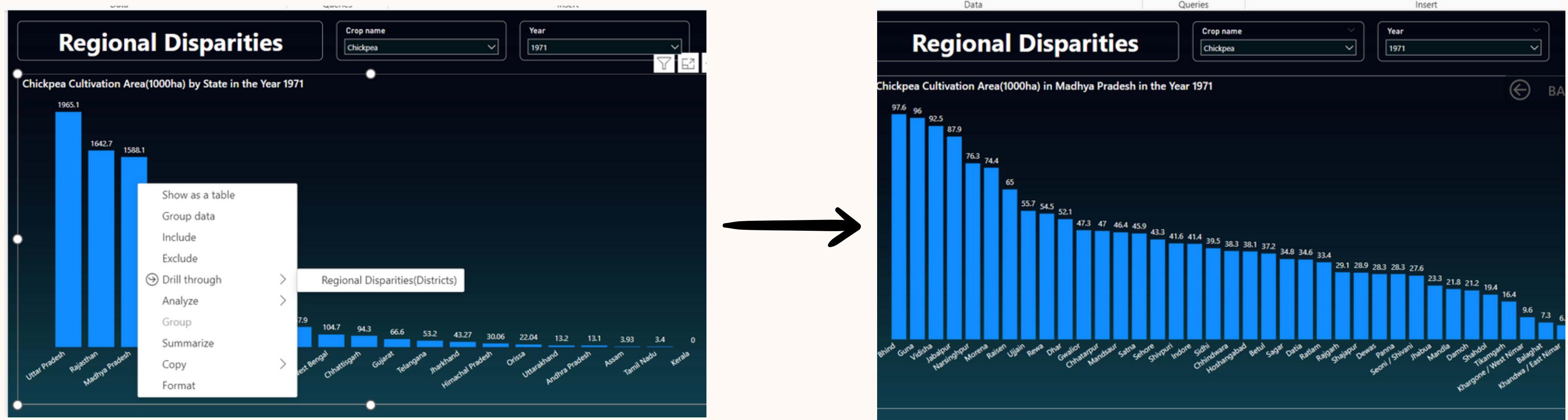
#	State Name	Dist Name	Attribute	1.2 Value	Custom	Crop name
1	Chhattisgarh	Durg	RICE AREA (1000 ha)	548	Area	Rice
2	Chhattisgarh	Durg	RICE PRODUCTION (1000 tons)	185	Production	Rice
3	Chhattisgarh	Durg	RICE YIELD (Kg per ha)	337.59	Yield	Rice
4	Chhattisgarh	Durg	WHEAT AREA (1000 ha)	44	Area	Wheat
5	Chhattisgarh	Durg	WHEAT PRODUCTION (1000 tons)	20	Production	Wheat
6	Chhattisgarh	Durg	WHEAT YIELD (Kg per ha)	454.55	Yield	Wheat
7	Chhattisgarh	Durg	KHARIF SORGHUM AREA (1000 ha)	0.6	Area	Kharif Sorghum
8	Chhattisgarh	Durg	KHARIF SORGHUM PRODUCTION (1000 tons)	0.4	Production	Kharif Sorghum
9	Chhattisgarh	Durg	KHARIF SORGHUM YIELD (Kg per ha)	666.67	Yield	Kharif Sorghum
10	Chhattisgarh	Durg	RABI SORGHUM AREA (1000 ha)	0	Area	Rabi Sorghum
11	Chhattisgarh	Durg	RABI SORGHUM PRODUCTION (1000 tons)	0	Production	Rabi Sorghum
12	Chhattisgarh	Durg	RABI SORGHUM YIELD (Kg per ha)	0	Yield	Rabi Sorghum
13	Chhattisgarh	Durg	SORGHUM AREA (1000 ha)	0.6	Area	Sorghum
14	Chhattisgarh	Durg	SORGHUM PRODUCTION (1000 tons)	0.4	Production	Sorghum
15	Chhattisgarh	Durg	SORGHUM YIELD (Kg per ha)	666.67	Yield	Sorghum
16	Chhattisgarh	Durg	PEARL MILLET AREA (1000 ha)	0	Area	Millet
17	Chhattisgarh	Durg	PEARL MILLET PRODUCTION (1000 tons)	0	Production	Millet
18	Chhattisgarh	Durg	PEARL MILLET YIELD (Kg per ha)	0	Yield	Millet
19	Chhattisgarh	Durg	MAIZE AREA (1000 ha)	3	Area	Maize
20	Chhattisgarh	Durg	MAIZE PRODUCTION (1000 tons)	2	Production	Maize
21	Chhattisgarh	Durg	MAIZE YIELD (Kg per ha)	666.67	Yield	Maize

Visualisations....

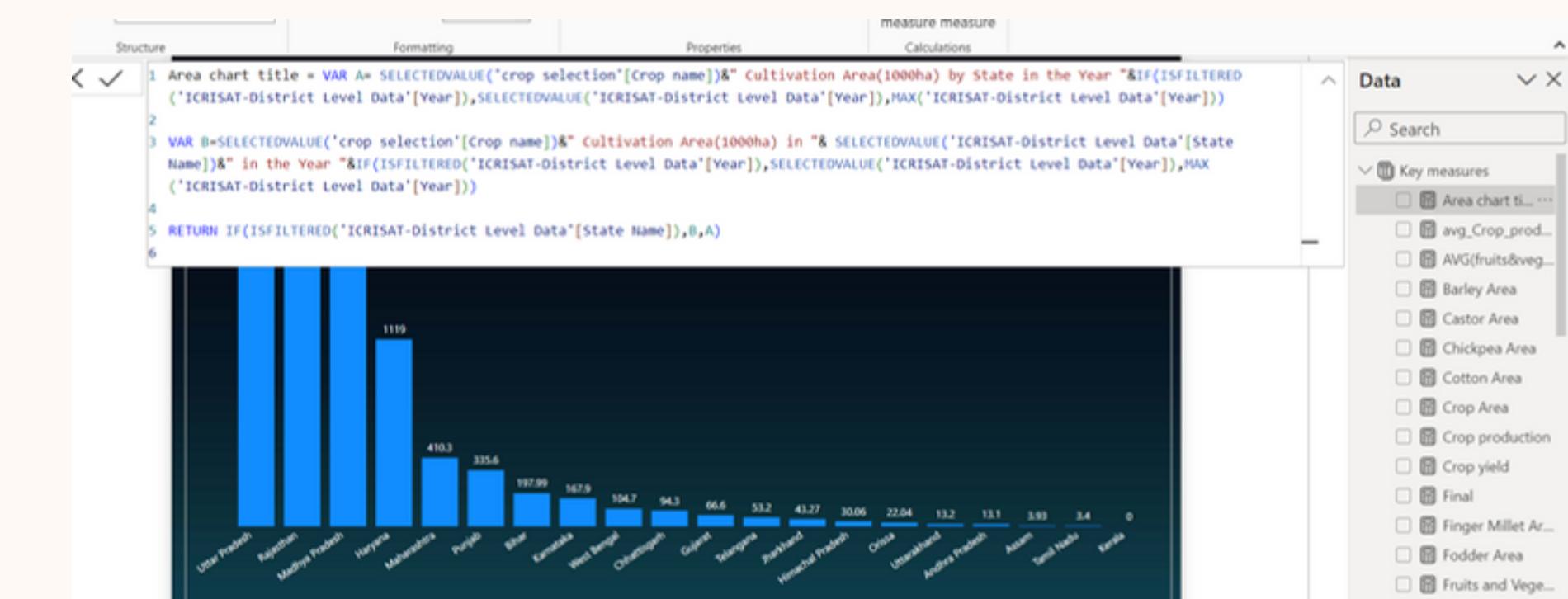
Analysed the trends in the cultivation of major crops, including rice, wheat, and pulses, focusing on changes in area, production, and yield.



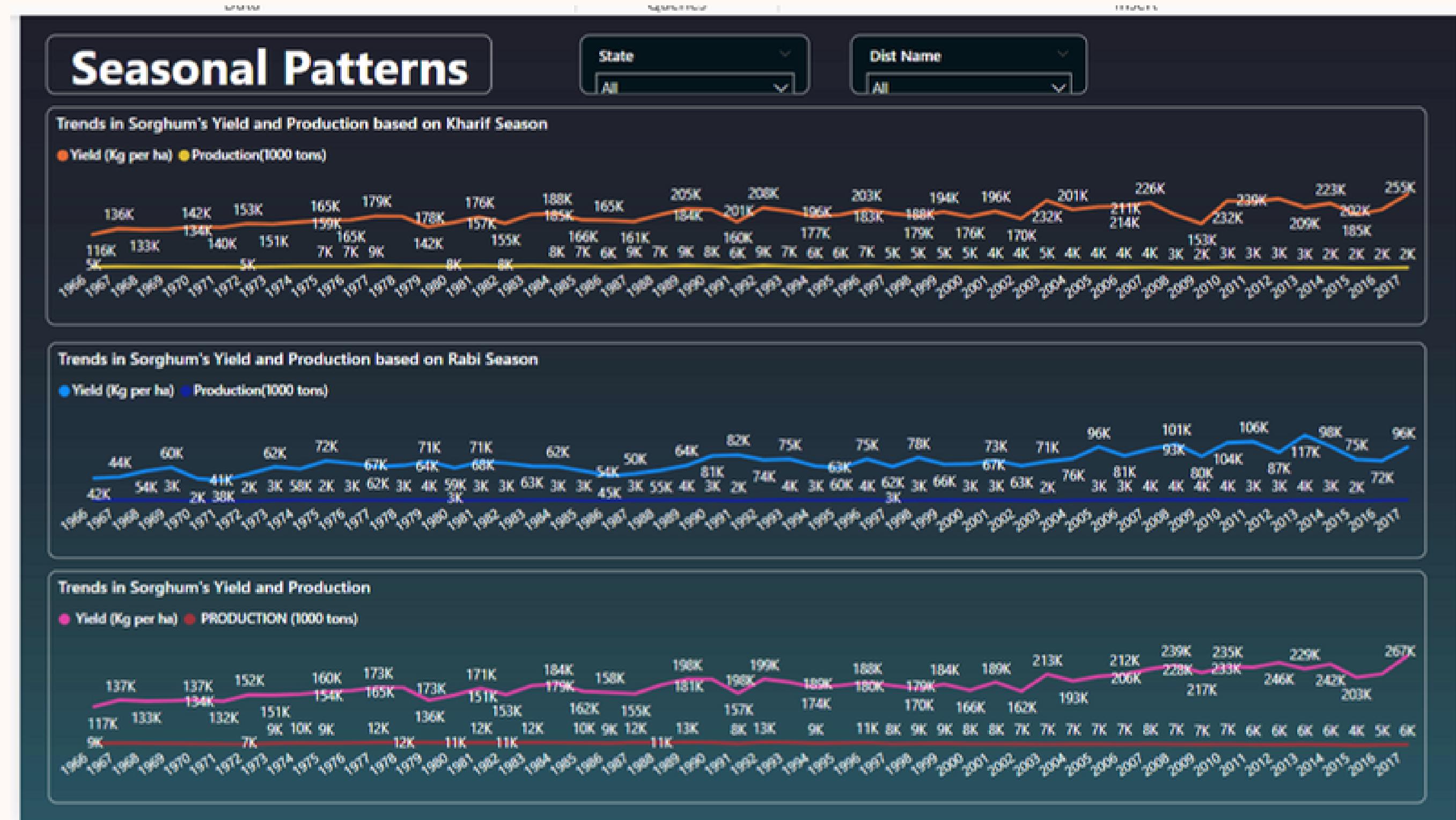
Identified disparities and variations in agricultural practices and outcomes across different districts and states...with use of drill through.



A DAX code written for column chart Title. Which shows the name of the crop along with year when we selects whichever crop&year

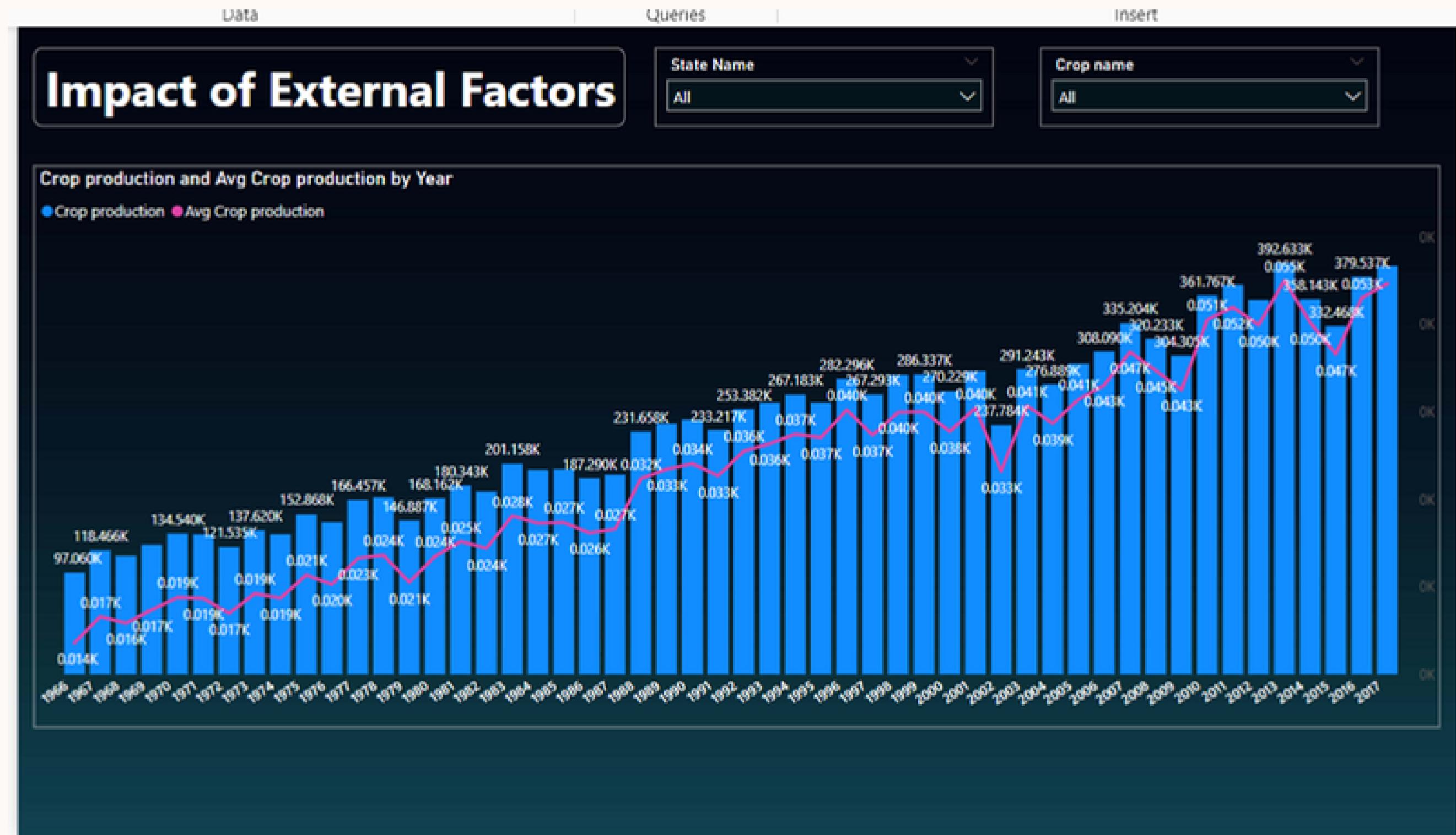


Explored seasonal patterns in crop cultivation, considering kharif and rabi seasons.



Investigated the impact of external factors like weather conditions on crop performance.

analyzed in which year the crop production was less than average and check was there any natural calamity in that year.



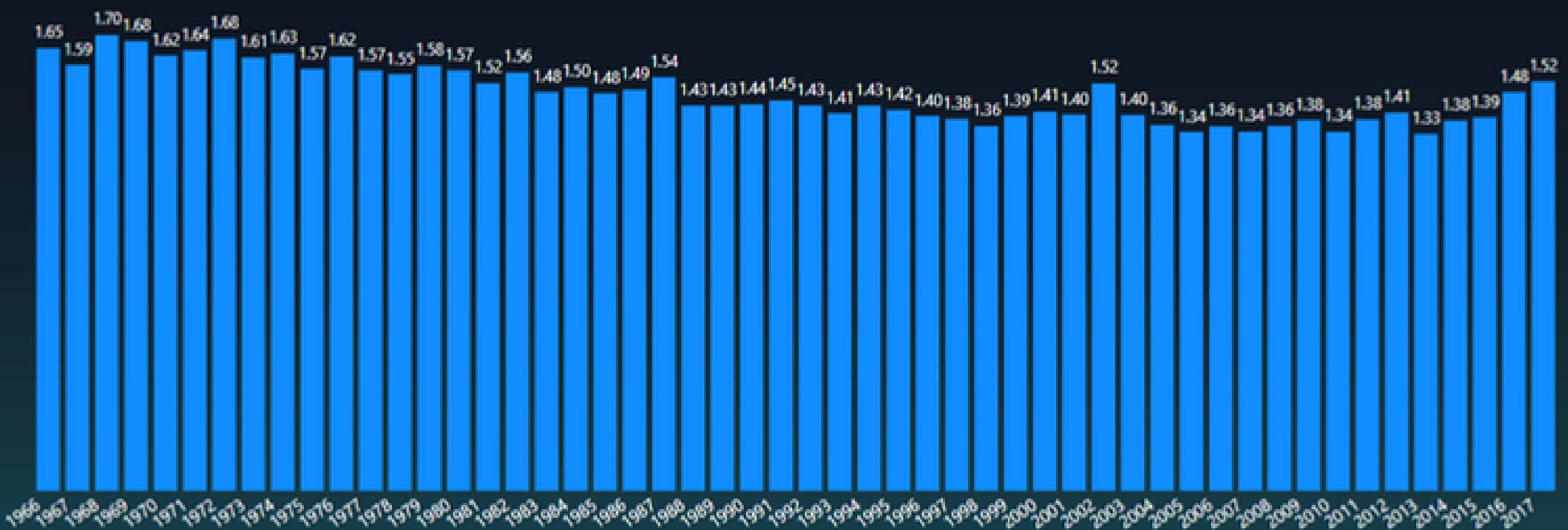
Data

Queries

Insert

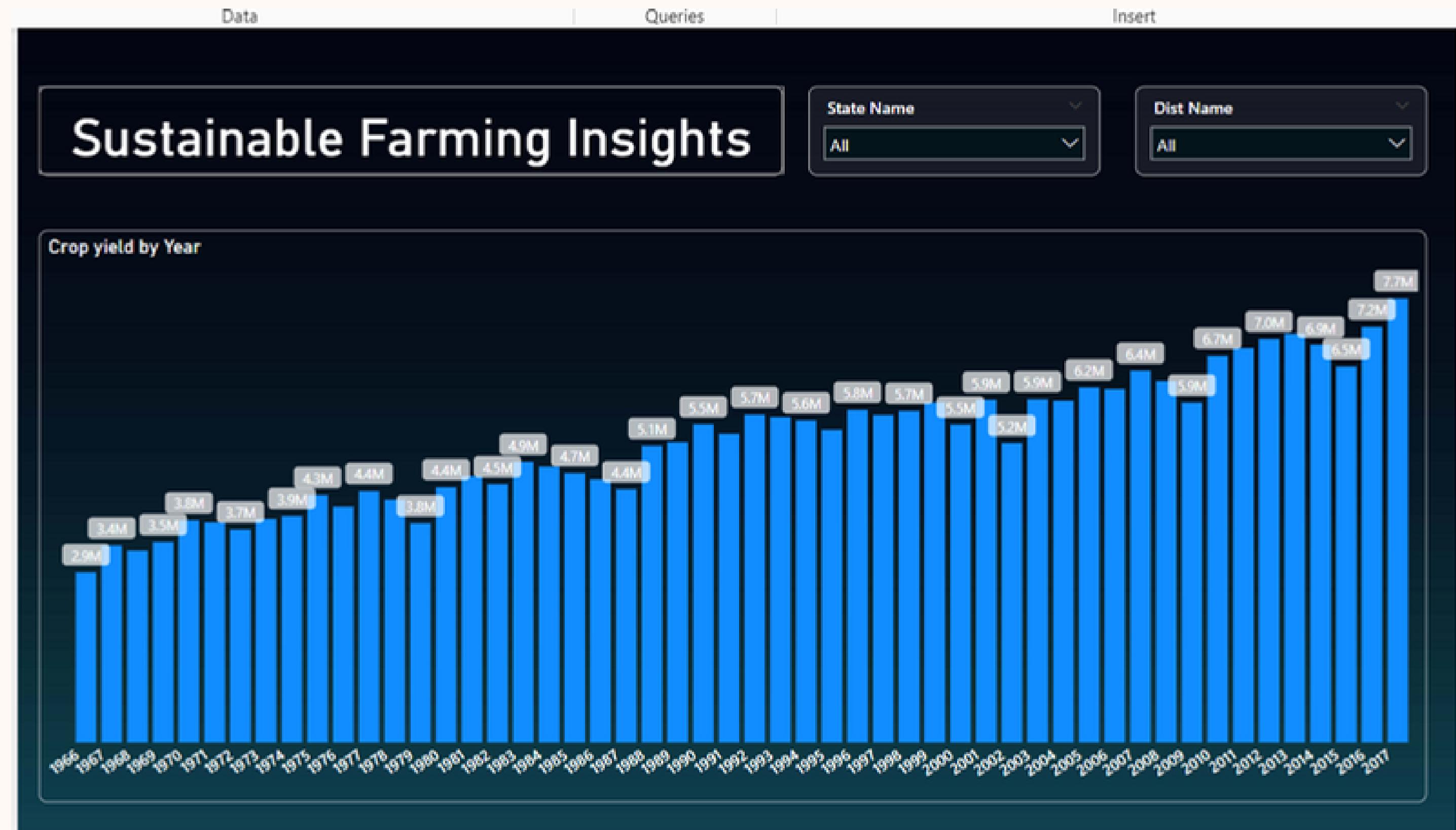
Fruits and Vegetables Analysis

Trends in Cultivation of Fruits& Vegetables based on Area(1000ha)



Analyzed the cultivation trends of fruits, vegetables, and their overall contribution to agricultural practices.

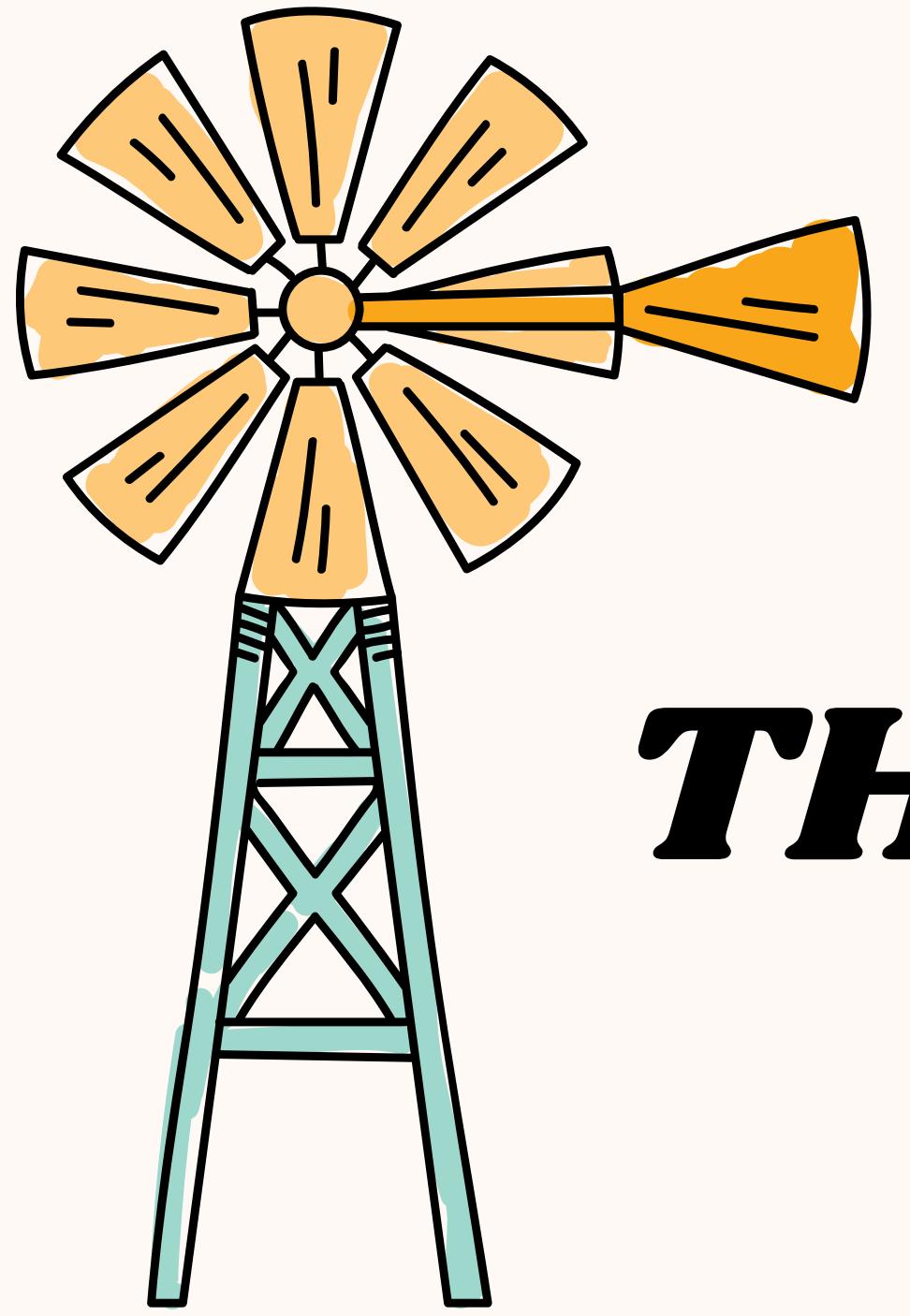
Derived insights that can contribute to promoting sustainable farming practices and optimizing resource allocation.



Conclusion:

Through this comprehensive analysis using Power BI, we have gained valuable insights into the intricacies of Indian agriculture at the district and year levels. By exploring crop-specific trends, regional disparities, seasonal patterns, and the impact of external factors, we have uncovered key information that can guide stakeholders in making informed decisions for sustainable farming practices and optimal resource allocation. The analysis of fruits and vegetables cultivation further enriches our understanding of the diverse agricultural landscape in India. These insights not only contribute to enhancing agricultural productivity but also pave the way for promoting environmentally conscious and resilient farming methods, ensuring a brighter future for the agricultural sector.





THANK you...

