

**A.A.GOVERNMENT ARTS COLLEGE, MUSIRI**

**Affiliated to Bharathidasan University,  
Tiruchirappalli**

**NAAN MUDHALVAN PROJECT –III BSC  
MATHEMATICS**

**TOPIC:**

**UNVEILING MARKET INSIGHTS: ANALYSING  
SPENDING BEHAVIOUR AND IDENTIFYING  
OPPURTUNITIES FOR GROWTH**

**Submitted by**

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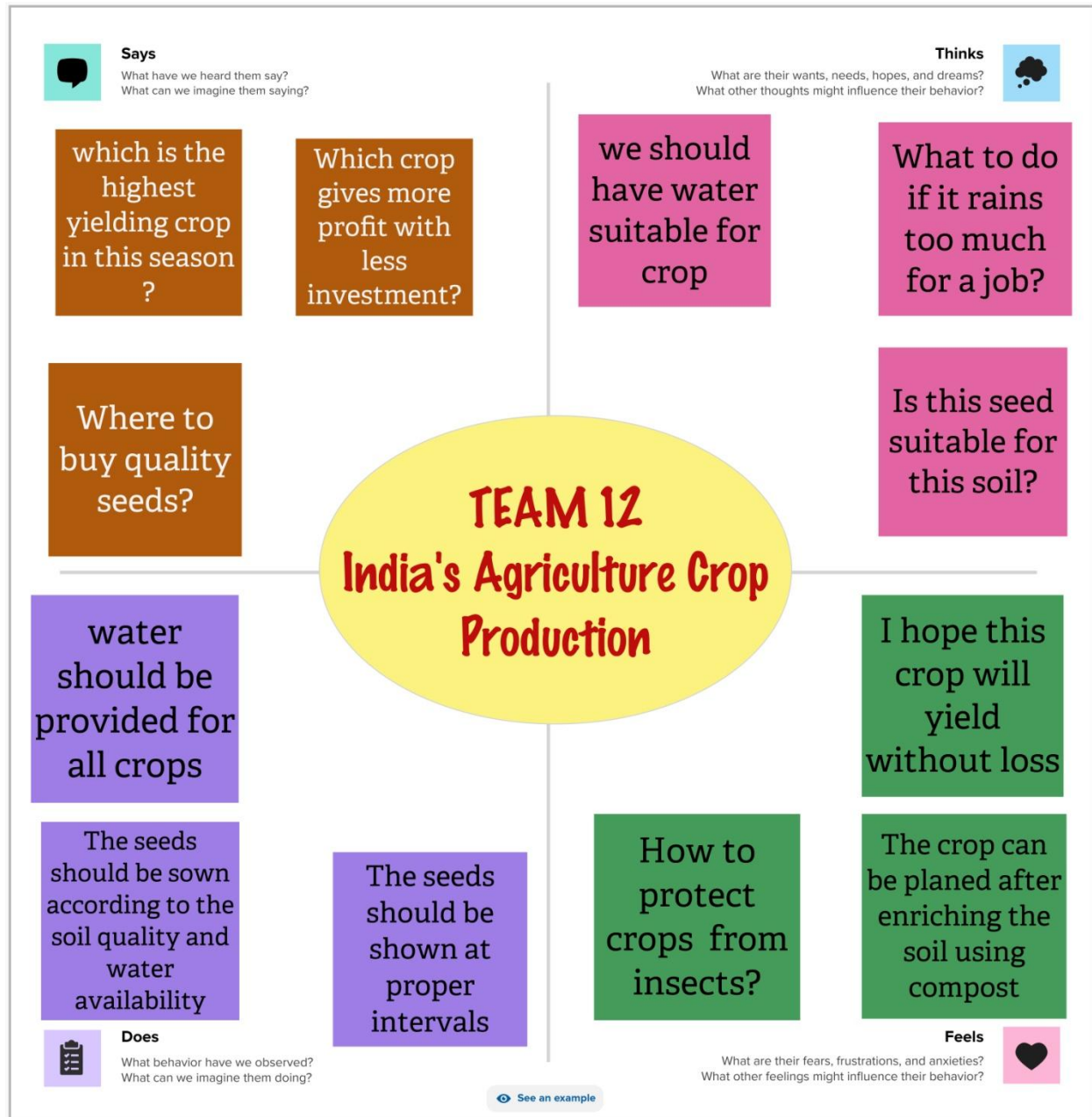
## **Introduction:**

# **India's Agricultural Crop Production Analysis (1997-2021)**

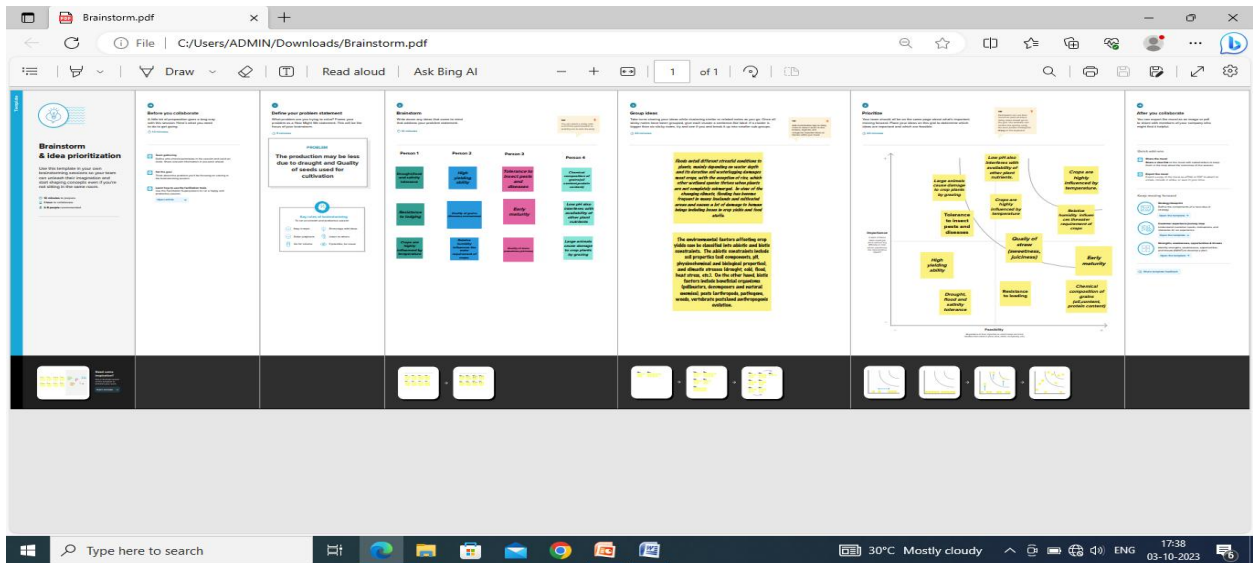
This report delves into the captivating realm of India's agricultural cultivation, providing a comprehensive visual exploration of key aspects and trends in the agricultural sector. Through the visual representations, readers can gain valuable insights into crop production, seasonal variations, regional distribution, and overall production trends. These visualizations enable intuitive analysis, allowing stakeholders to uncover patterns, identify areas of growth or concern, and make data-driven decisions.

By harnessing the power of Tableau, this report not only presents the data in a visually appealing manner but also provides an interactive experience for readers to explore the intricacies of India's agricultural cultivation. To Extract the Insights from the data and put the data in the form of visualizations, Dashboards and Story we employed Tableau tool.

## Milestone 1: Define Problem / Problem Understanding



# BRAINSTORMING



## Milestone 2: Data Collection & Extraction

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

### Activity 1: Downloading the dataset

<https://www.kaggle.com/datasets/pyatakov/india-agriculture-crop-production>

India Agriculture Crop Production - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
11	Andaman	SOUTH AN Banana	2003-04	Whole Ye	1530	Hectare		11558	Tonnes	7.554248											
12	Andaman	NICOBARS Black pep	2002-03	Whole Ye	63	Hectare		13.5	Tonnes	0.214286											
13	Andaman	NICOBARS Black pep	2003-04	Whole Ye	75.5	Hectare		15.86	Tonnes	0.210066											
14	Andaman	SOUTH AN Black pep	2002-03	Whole Ye	487	Hectare		102.5	Tonnes	0.210472											
15	Andaman	SOUTH AN Black pep	2003-04	Whole Ye	497	Hectare		104.37	Tonnes	0.21											
16	Andaman	NICOBARS Cashewnu	2001-02	Whole Ye	719	Hectare		192	Tonnes	0.267038											
17	Andaman	NICOBARS Cashewnu	2002-03	Whole Ye	719	Hectare		208	Tonnes	0.289291											
18	Andaman	NICOBARS Cashewnu	2003-04	Whole Ye	717	Hectare		208.5	Tonnes	0.290795											
19	Andaman	NORTH AN Cashewnu	2001-02	Whole Ye	81	Hectare		33	Tonnes	0.407407											
20	Andaman	SOUTH AN Cashewnu	2002-03	Whole Ye	81	Hectare		24	Tonnes	0.296296											
21	Andaman	SOUTH AN Cashewnu	2003-04	Whole Ye	116.5	Hectare		26.14	Tonnes	0.224378											
22	Andaman	NICOBARS Coconut	2001-02	Whole Ye	18190	Hectare		64430000	Nuts	3542.056											
23	Andaman	NICOBARS Coconut	2002-03	Whole Ye	18240	Hectare		67490000	Nuts	3700.11											
24	Andaman	NICOBARS Coconut	2003-04	Whole Ye	18284.74	Hectare		68580000	Nuts	3750.669											
25	Andaman	NORTH AN Coconut	2001-02	Whole Ye	7015	Hectare		25250000	Nuts	3599.43											
26	Andaman	SOUTH AN Coconut	2002-03	Whole Ye	7060	Hectare		26830000	Nuts	3800.283											
27	Andaman	SOUTH AN Coconut	2003-04	Whole Ye	7110	Hectare		26660000	Nuts	3749.648											
28	Andaman	NICOBARS Dry chillie	2002-03	Whole Ye	413	Hectare		28.8	Tonnes	0.069734											
29	Andaman	NICOBARS Dry chillie	2003-04	Whole Ye	60	Hectare		102	Tonnes	1.7											
30	Andaman	SOUTH AN Dry chillie	2002-03	Whole Ye	239	Hectare		20.9	Tonnes	0.087448											
31	Andaman	SOUTH AN Dry chillie	2003-04	Whole Ye	340	Hectare		578	Tonnes	1.7											
32	Andaman	NICOBARS Ginger	2001-02	Whole Ye	46	Hectare		100	Tonnes	2.173913											
33	Andaman	NICOBARS Ginger	2002-03	Whole Ye	47.3	Hectare		133	Tonnes	2.811839											
34	Andaman	NICOBARS Ginger	2003-04	Whole Ye	102	Hectare		326.4	Tonnes	3.2											
35	Andaman	NORTH AN Ginger	2001-02	Whole Ye	344	Hectare		1124	Tonnes	3.267442											

### Activity 3: Connect Dataset with Tableau

File Data Server Window Help

**Connections** Add

Agriculture  
Text file

**Files** p

☐ Use Data Interpreter  
Data interpreter might be able to clean your Text file workbook.

Agriculture.csv  
Combined.csv

New Union

**Agriculture**

Connection: ☒ Live ☐ Extract Filters: 0 | Add

Need more data?  
Drag tables here to relate them. [Learn more](#)

Agriculture.csv 9 fields 345407 rows 100 rows

Name	State	District	Crop	Year	Season	Area	Production	Production Units
Maharashtra	AMRAVATI	Gram	01-01-2004	Rabi	37,200.00	20,900.00	Tonnes	
Maharashtra	AMRAVATI	Gram	01-01-2005	Rabi	51,800.00	50,400.00	Tonnes	
Maharashtra	AMRAVATI	Gram	01-01-2006	Rabi	73,300.00	56,700.00	Tonnes	
Maharashtra	AURANGABAD	Gram	01-01-2004	Rabi	38,500.00	23,700.00	Tonnes	
Maharashtra	AURANGABAD	Gram	01-01-2005	Rabi	39,100.00	28,500.00	Tonnes	
Maharashtra	AURANGABAD	Gram	01-01-2006	Rabi	52,100.00	44,900.00	Tonnes	

Go to Worksheet

Data Source Sheet 1

## **Milestone 3: Data Visualization**

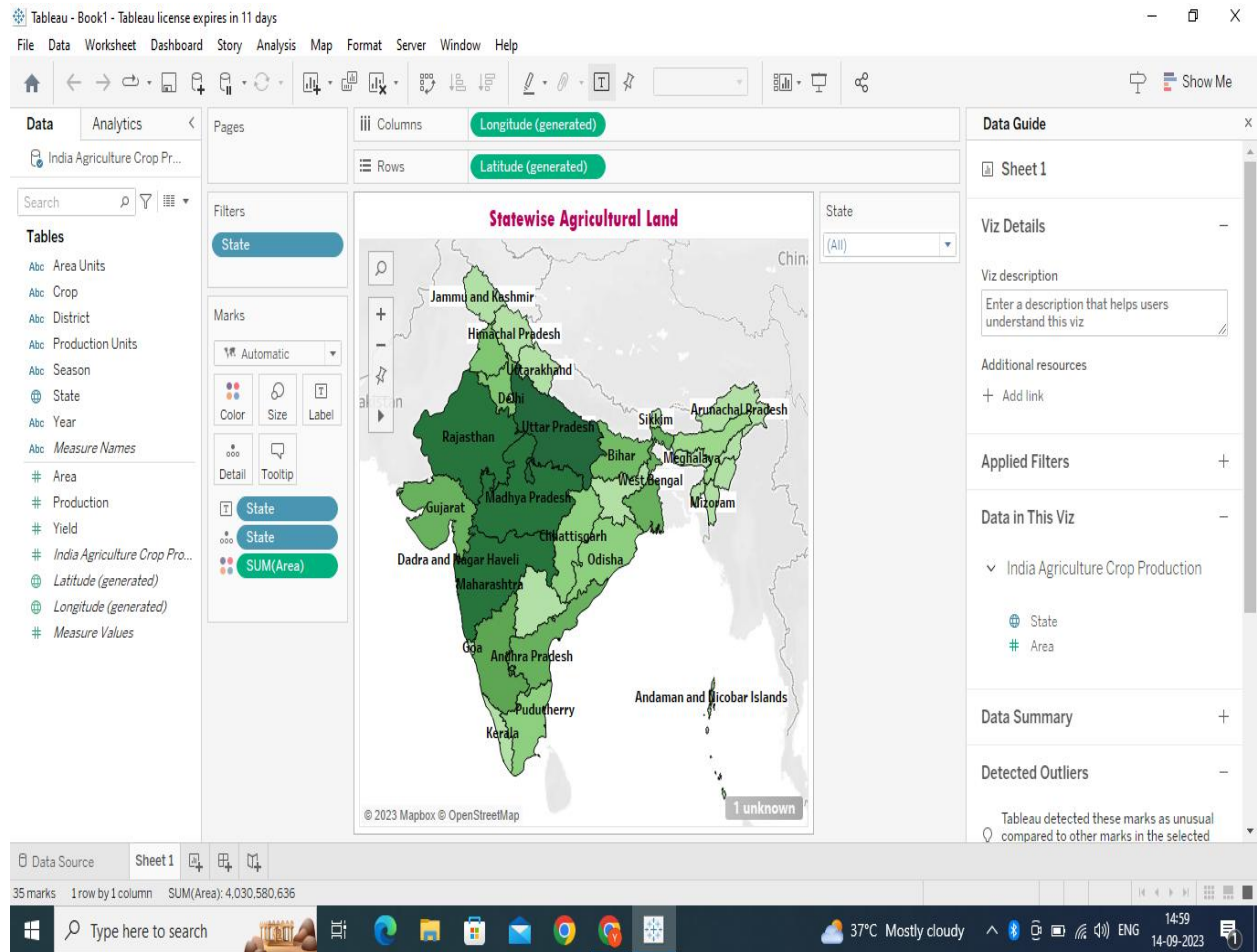
Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

### **Activity 1: No of Unique Visualizations**

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the performance and efficiency of a project include bar charts, line charts, heat maps, scatter plots, pie charts, Maps, etc. These visualizations can be used to compare performance, track changes over time, and show distribution, and relationships between variables

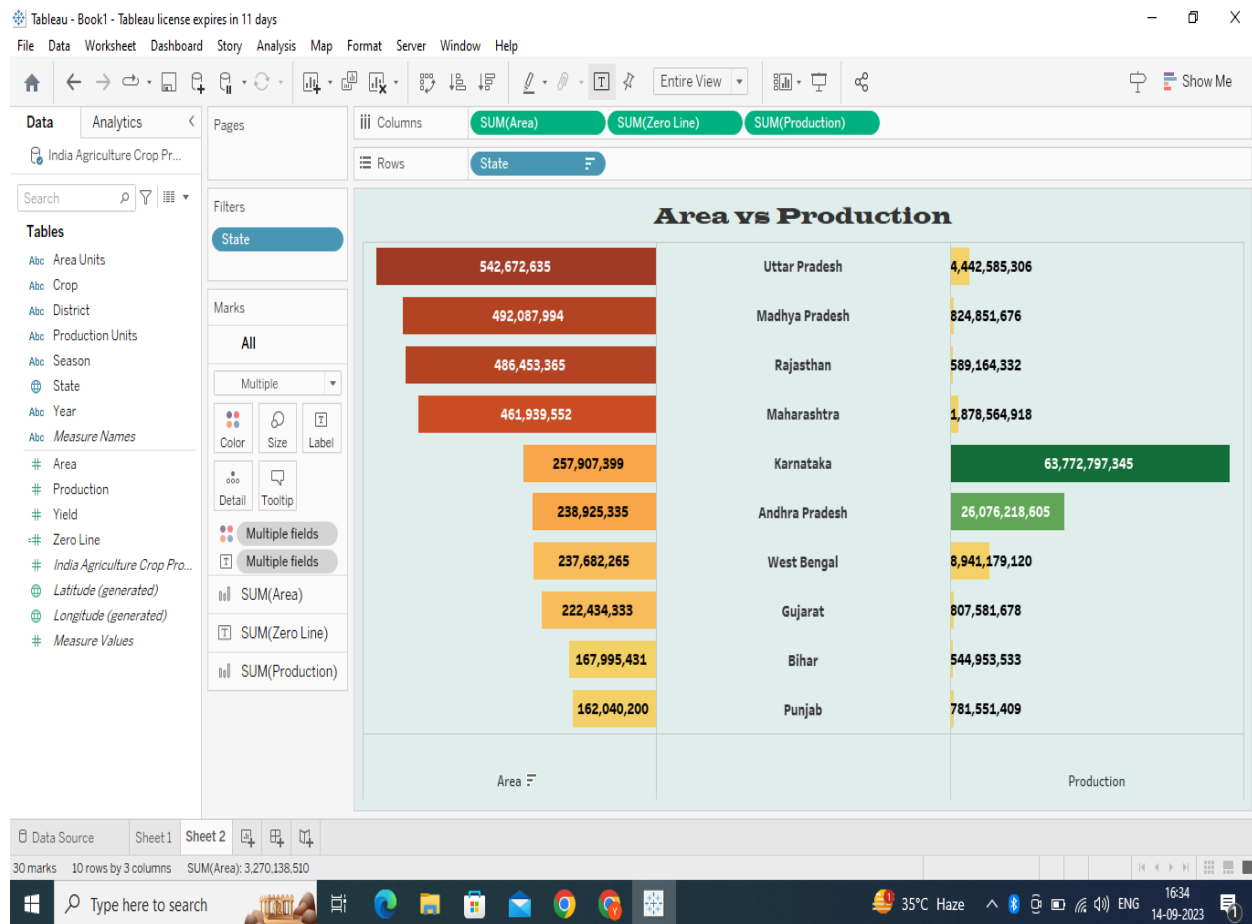
# Activity 1.1: State Wise Agricultural Land

[https://drive.google.com/file/d/1\\_wlicW-o9q1QzZhy22sq4xB4-Av2gXzl/view?usp=sharing](https://drive.google.com/file/d/1_wlicW-o9q1QzZhy22sq4xB4-Av2gXzl/view?usp=sharing)



## Activity 1.2: Area VS Production

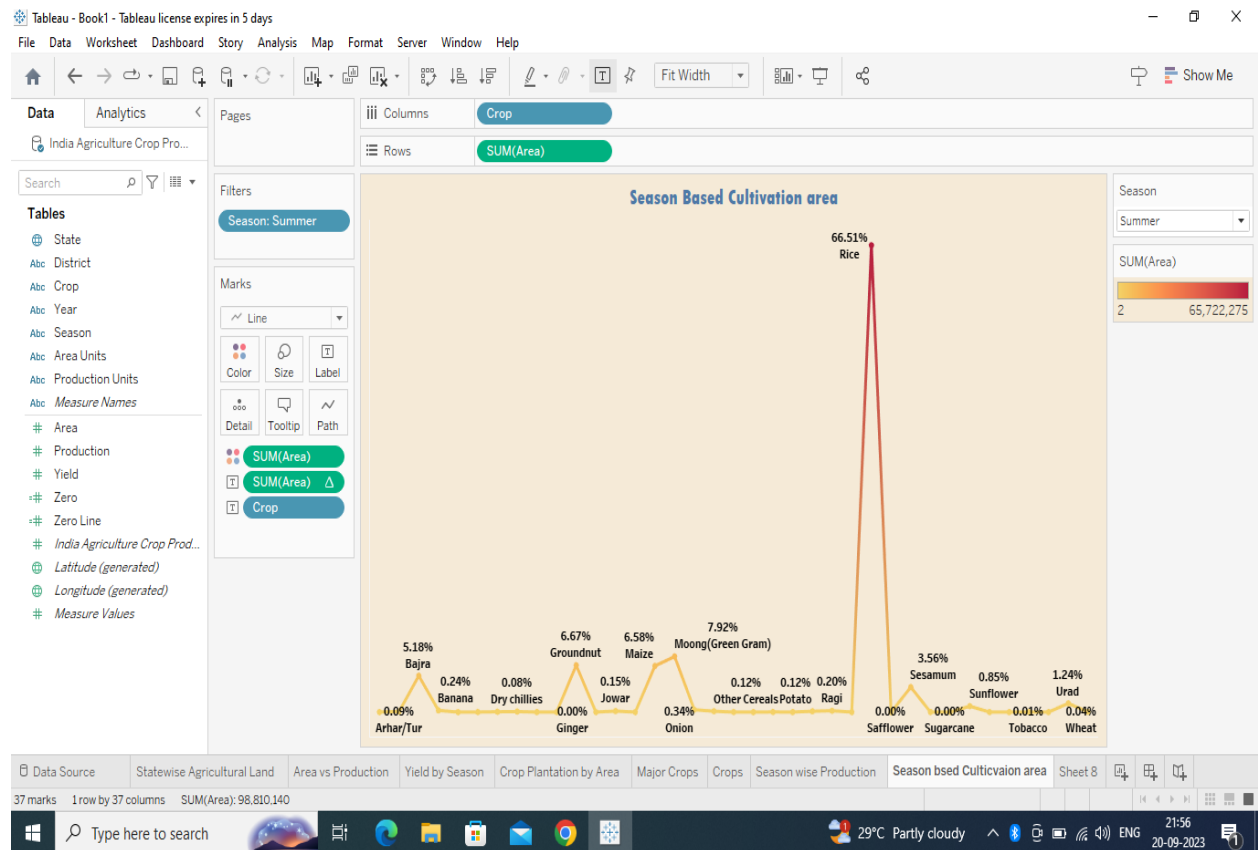
[https://drive.google.com/file/d/10KqybE9GjHIO\\_MG6pJFu2yVcT8NO4e62/view?usp=sharing](https://drive.google.com/file/d/10KqybE9GjHIO_MG6pJFu2yVcT8NO4e62/view?usp=sharing)



## Activity 1.3: Season based cultivation

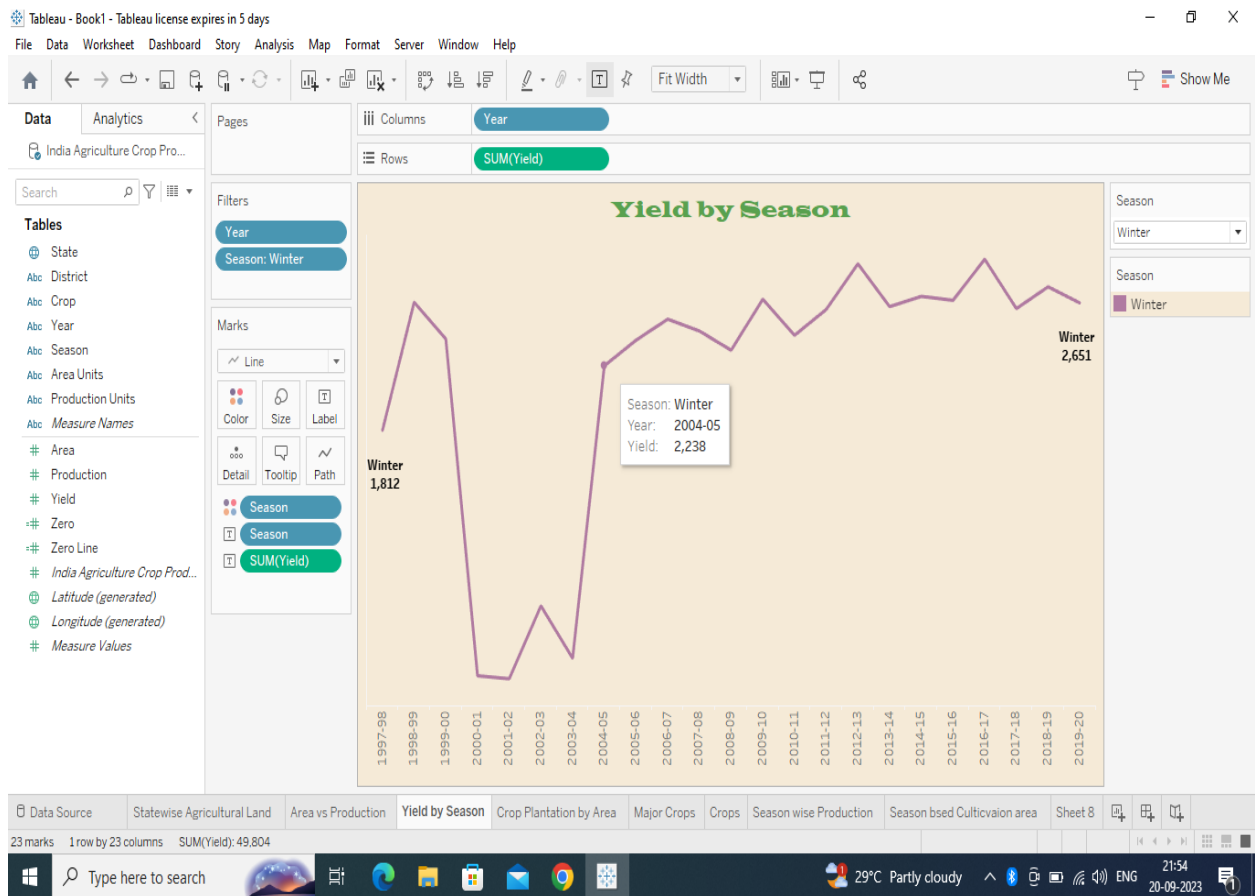


<https://drive.google.com/file/d/12iha9VLov2NI2ZDUiLrNndI2Ja6-IIWL/view?usp=sharing>



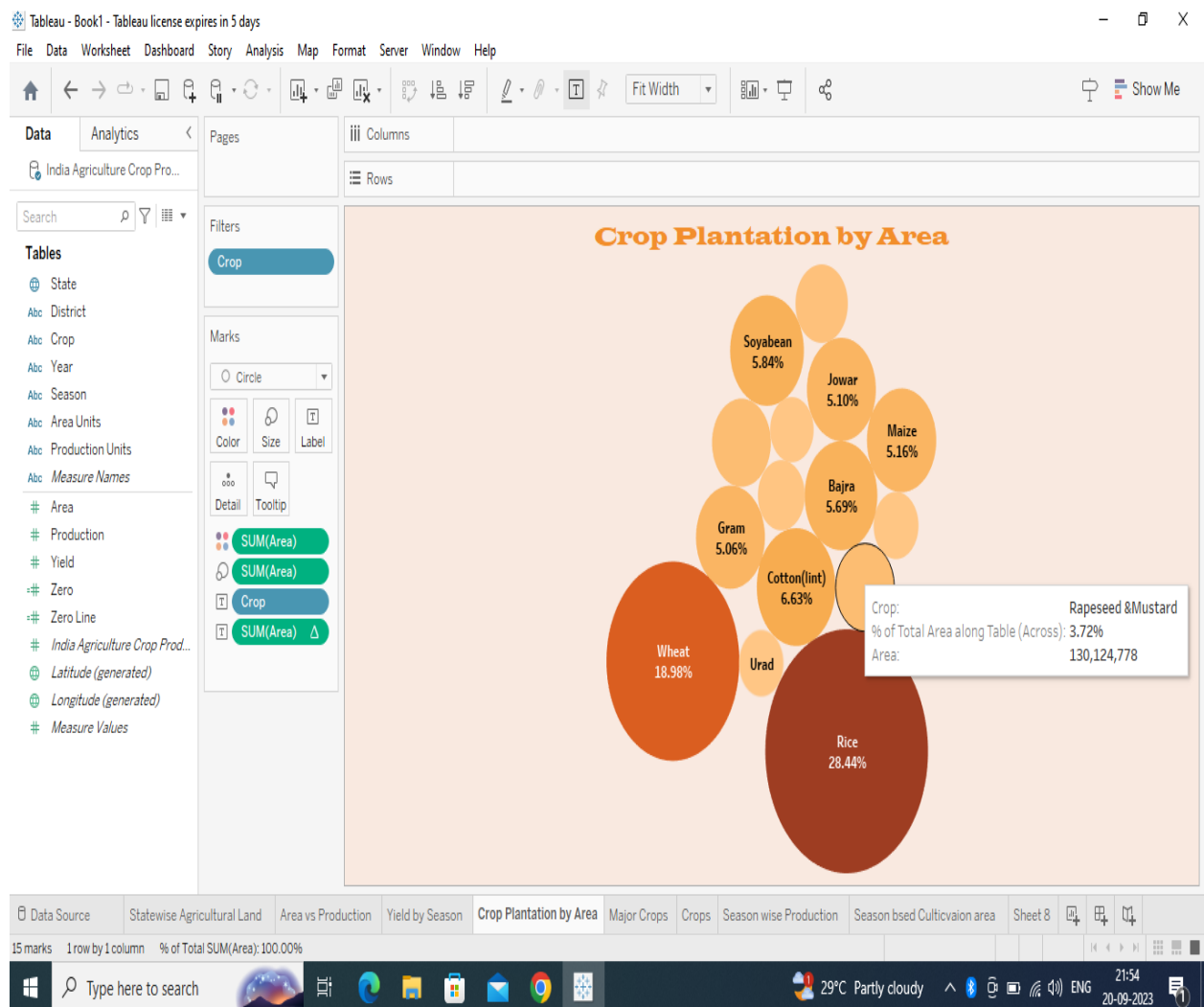
## Activity 1.4: Yield by season

[https://drive.google.com/file/d/1kFlbWhKzsDbsBunvHy-I\\_iO4fJ\\_hWktj/view?usp=sharing](https://drive.google.com/file/d/1kFlbWhKzsDbsBunvHy-I_iO4fJ_hWktj/view?usp=sharing)



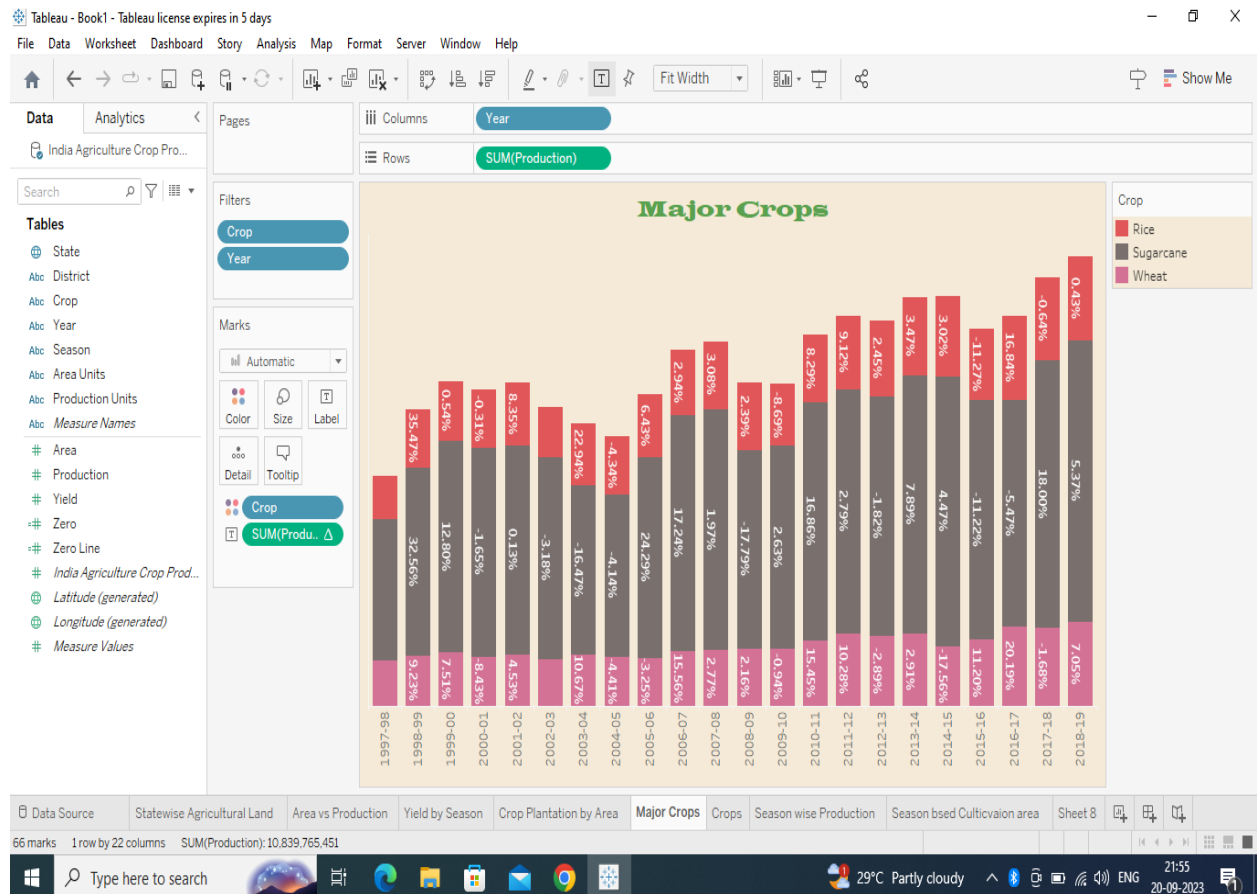
# Activity 1.5 : Crop plantation by area

[https://drive.google.com/file/d/1I\\_ZI-BqrTr9Vkp4SHToaMoVSAZ-eBXw/view?usp=sharing](https://drive.google.com/file/d/1I_ZI-BqrTr9Vkp4SHToaMoVSAZ-eBXw/view?usp=sharing)



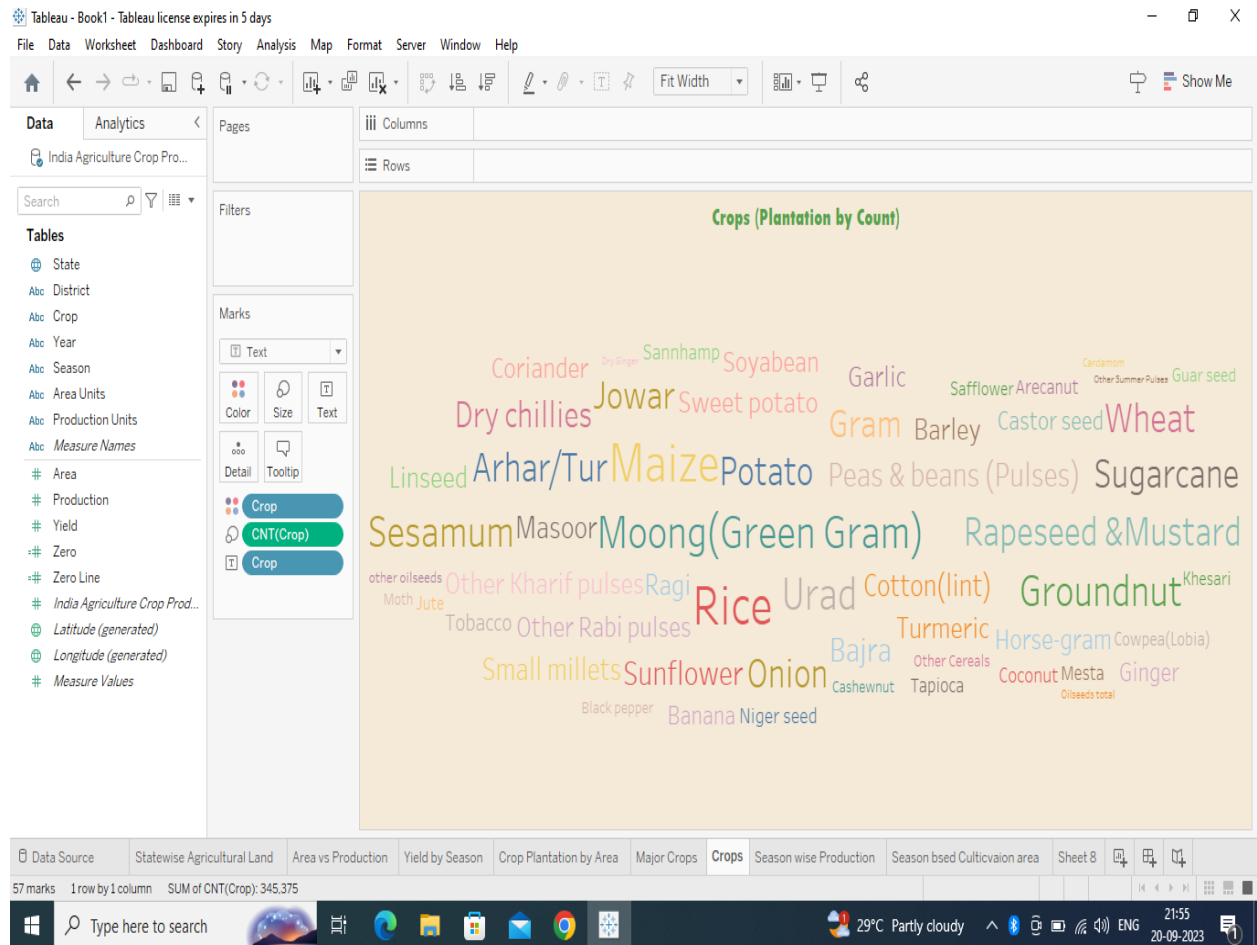
## Activity 1.6: Major Crops Growth Yoy

[https://drive.google.com/file/d/1xF7NT\\_6MQ7isCmpji6\\_bPqo2yLSl6a8o/view?usp=sharing](https://drive.google.com/file/d/1xF7NT_6MQ7isCmpji6_bPqo2yLSl6a8o/view?usp=sharing)



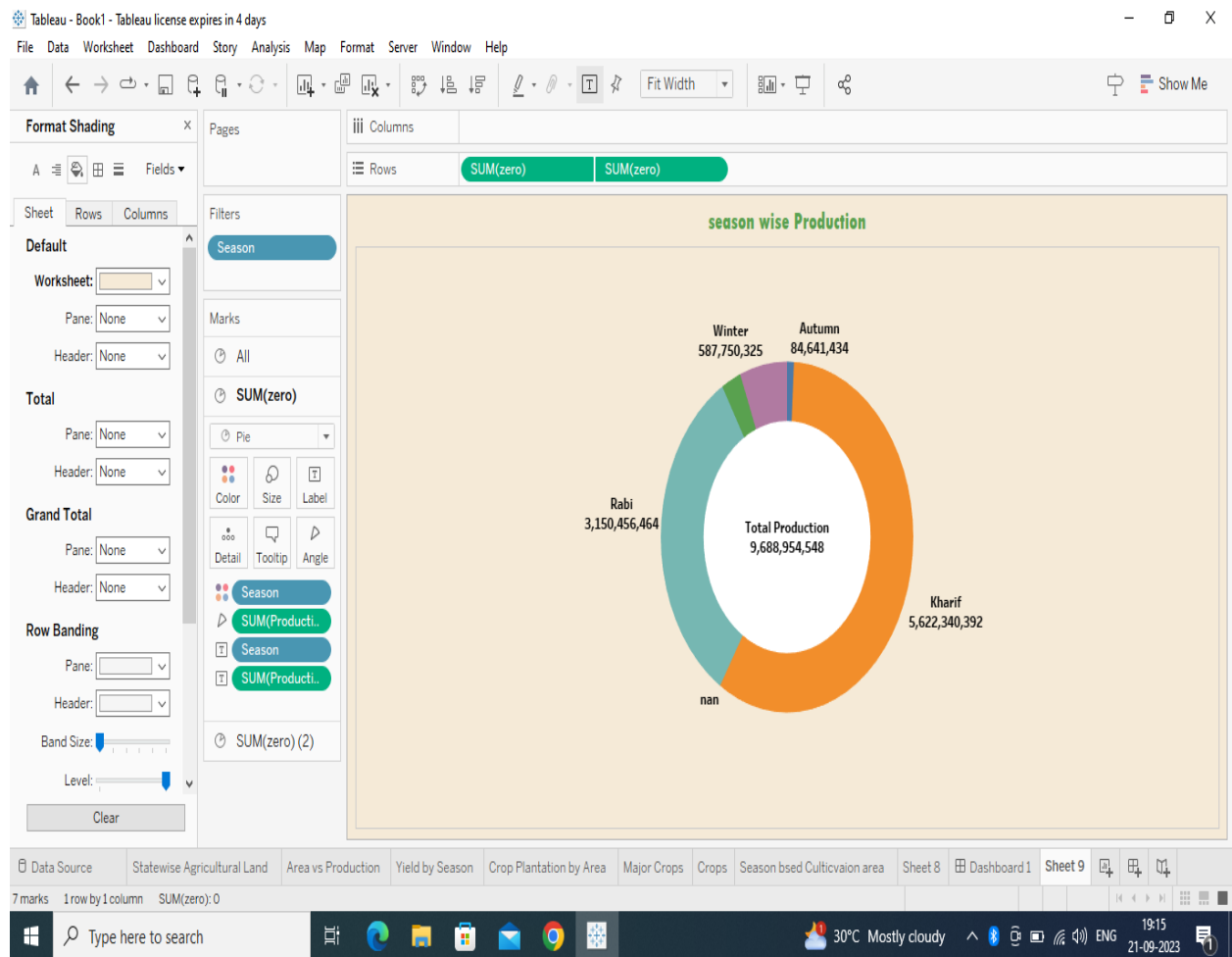
## Activity 1.7: Crops

[https://drive.google.com/file/d/10FeRXh0m68fE3kYRQP2OL7tITgeuCLCG/view?usp=drive\\_link](https://drive.google.com/file/d/10FeRXh0m68fE3kYRQP2OL7tITgeuCLCG/view?usp=drive_link)



## Activity 1.8: Season Wise production

[https://drive.google.com/file/d/1pf8mxXV3IIcIT2-pUD5PMBhHW\\_zkMdXI/view?usp=sharing](https://drive.google.com/file/d/1pf8mxXV3IIcIT2-pUD5PMBhHW_zkMdXI/view?usp=sharing)



## **Milestone 5: Dashboard**

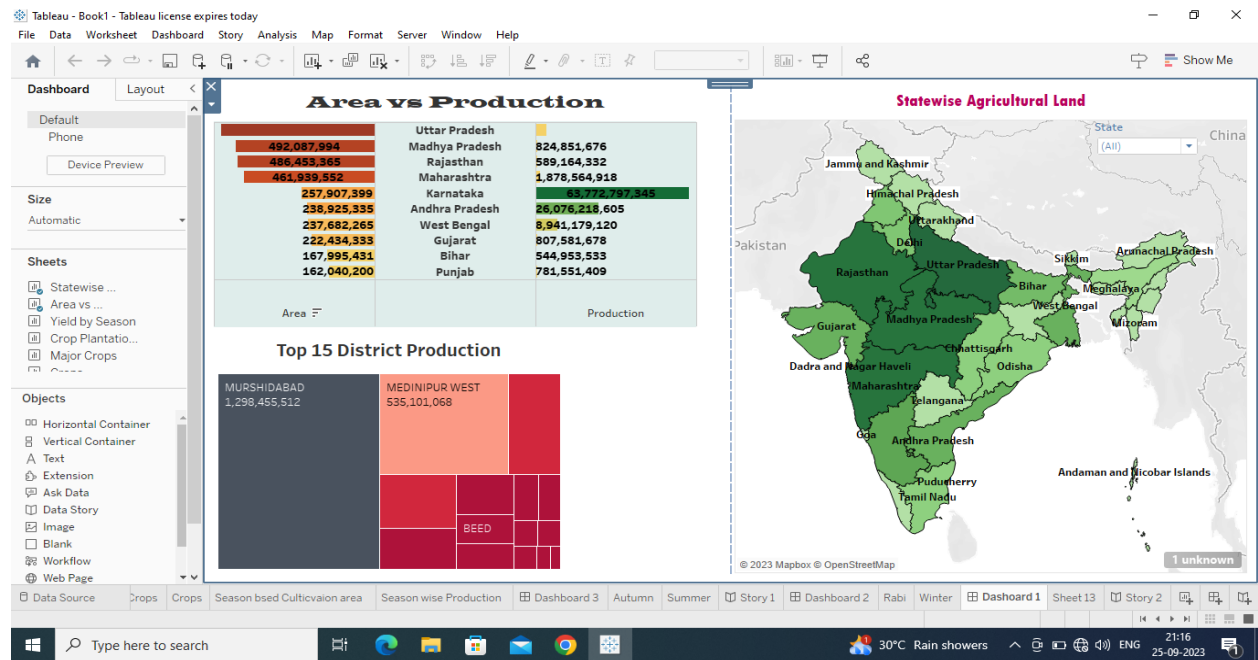
A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data, and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

### **Activity 1: Responsive and Design of dashboard**

Once you have created views on different sheets in Tableau , you can pull them into a dashboard.

#### **Activity 1.1: Dashboard 1**

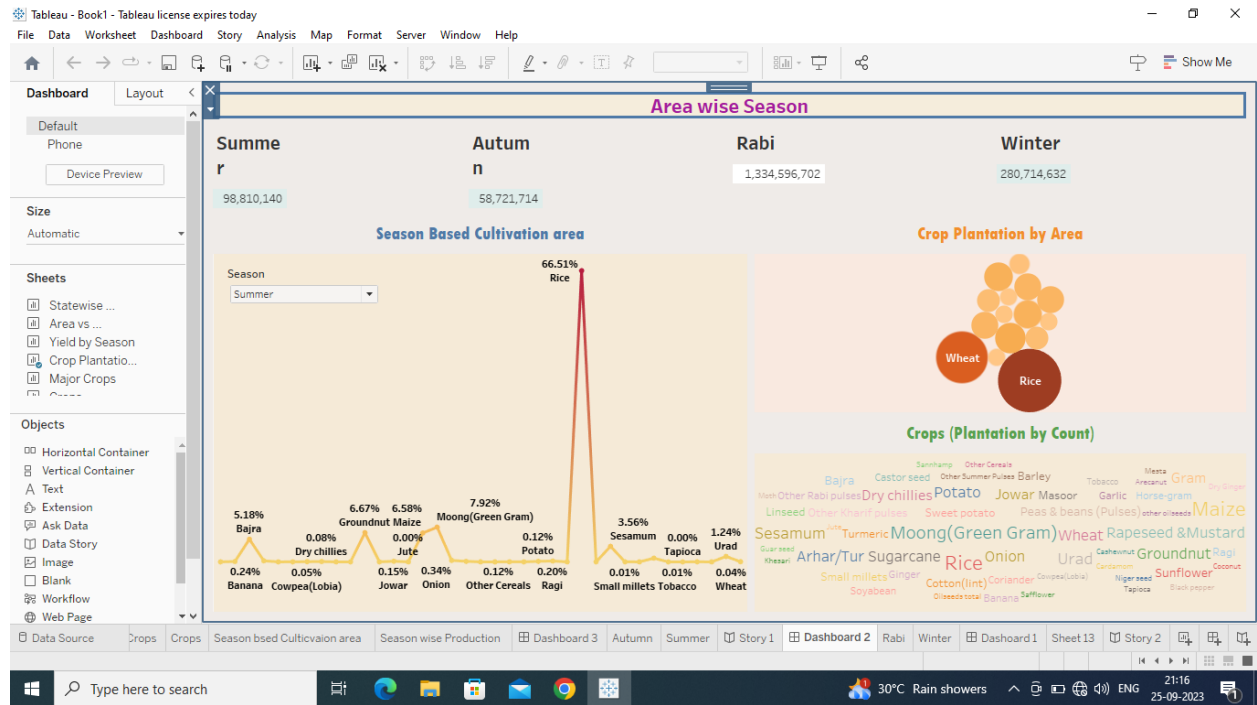
<https://drive.google.com/file/d/1OXIjbH8EZnBUWFCfX4I9k8j1L8KQmmri/view?usp=sharing>



## Activity 1.2: Dashboard 2

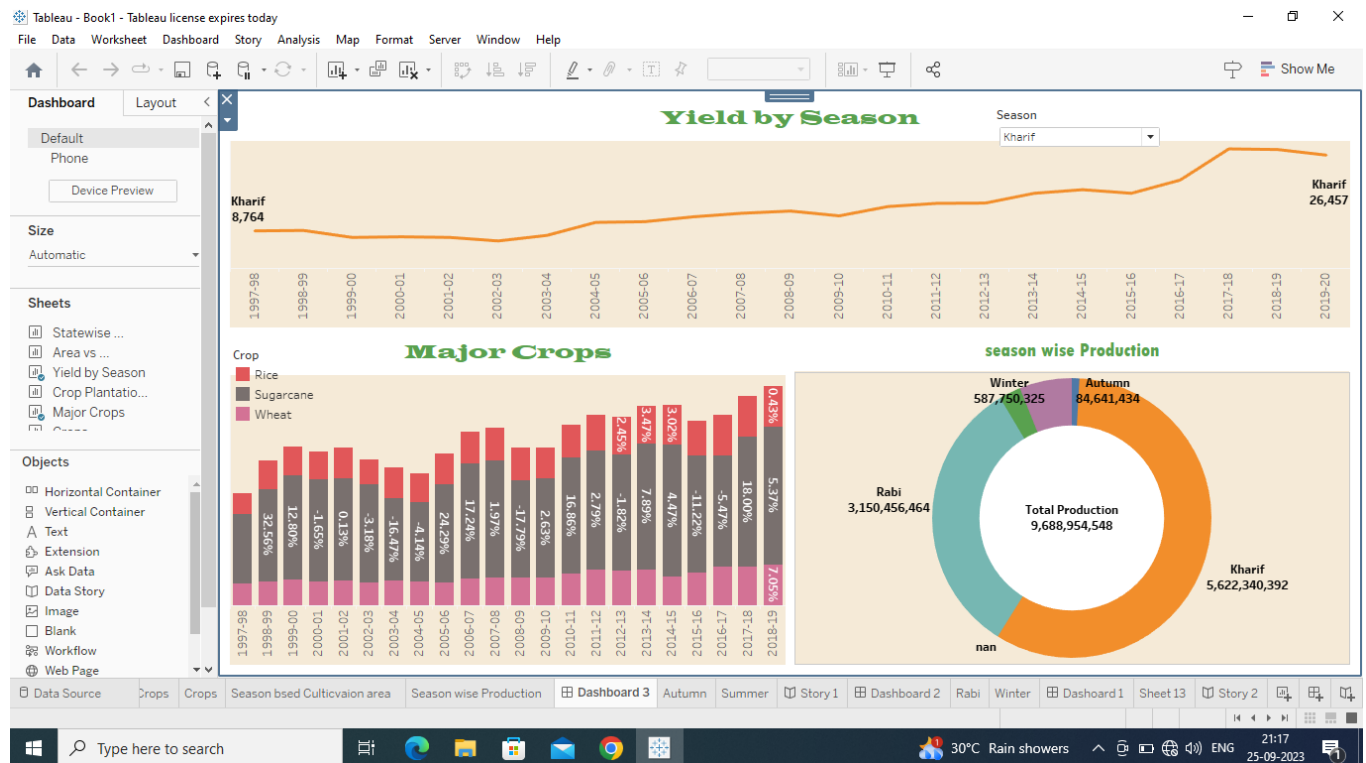
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## Activity 1.3: Dashboard 3

<https://drive.google.com/file/d/1e8LEowzsS83kydeF-bHRdN1Faly42AQ4/view?usp=sharing>



## Milestone 6: Story

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

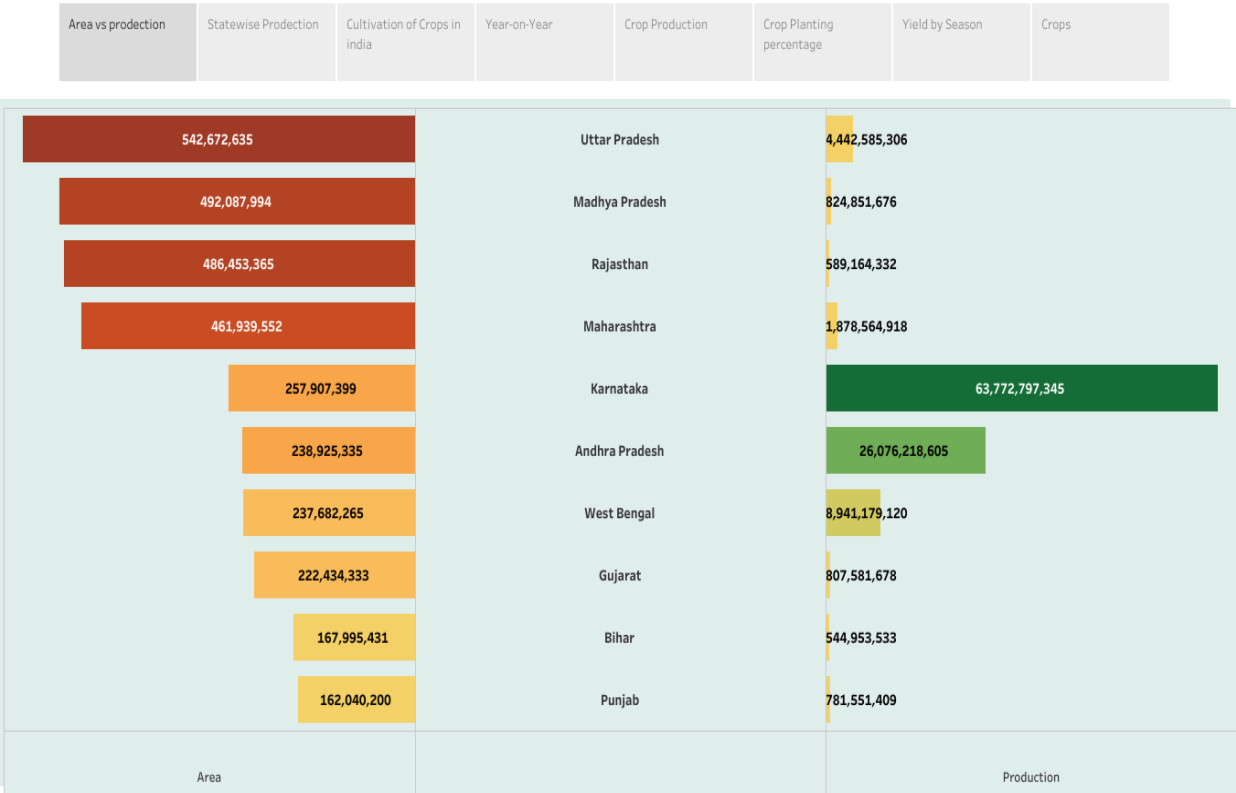
### Activity 1: Number of scenes in a story

The number of scenes in a storyboard for this project will depend on the complexity of the analysis and the specific insights that are trying to be conveyed. A storyboard is a visual representation of the data analysis process and it breaks down the analysis into a series of steps or scenes.

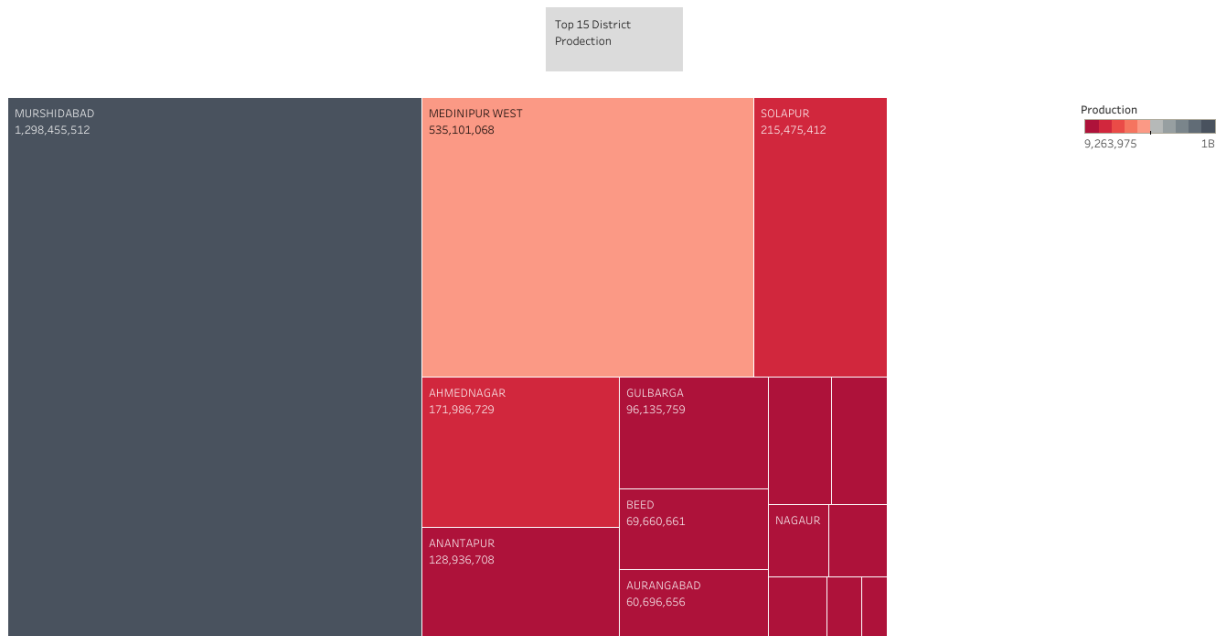
# Activity 1.1: Story 1

<https://drive.google.com/file/d/19wMplpy7nGRqwJfg13PJr766CwxyJ13/view?usp=sharing>

Insights into India's agricultural cultivation



## Story 2



## Milestone 8: Publishing

**Publishing Tableau Desktop to Tableau Public is a process that allows to share your Tableau visualizations publicly on the internet. Tableau Public is a free cloud-based platform provided by Tableau Software specifically designed for sharing interactive data visualizations with the world. When you publish to Tableau Public, your visualizations become accessible to anyone on the web, and you can embed them in websites, blogs, and social media.**

## Dashboard 1

[https://public.tableau.com/views/Dashboard1\\_16955572331600/Dashoard1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Dashboard1_16955572331600/Dashoard1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## Dashboard 2

[https://public.tableau.com/views/Dashboard2\\_16955576202960/Dashboard2?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Dashboard2_16955576202960/Dashboard2?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## Dashboard 3

[https://public.tableau.com/views/Dashboard3\\_16955578286540/Dashboard3?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Dashboard3_16955578286540/Dashboard3?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## Story 1

[https://public.tableau.com/views/Story\\_16955581246680/Story1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Story_16955581246680/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## Story 2

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## **Conclusion**

The Indian economy is an agro-economy and depends highly on the agricultural sector. Despite just supporting the Indian Economy, the agricultural sector also supports the industrial sector and international trade in imports and exports. Although the contribution of the Agricultural Sector to the Indian Economy is reducing, it is the sector with the most number of people working in it around the country.

## **Reference**

[https://www.google.com/search?q=india%27s+agricultural+ctop+production+conclusion+in+english&rlz=1C1VDKB\\_enIN1052IN1052&oq=india%27s+agricultural+ctop+production+conclusion+&gs\\_lcrp=EgZjaHJvbWUqCQgCECEYChigATIGCAAQRRg5MgkIARAhGAoYoAEyCQgCECEYChigATIJCAMQIRgKGKAB0gEKMzkwMDNqMGoxNagCALACAA&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=india%27s+agricultural+ctop+production+conclusion+in+english&rlz=1C1VDKB_enIN1052IN1052&oq=india%27s+agricultural+ctop+production+conclusion+&gs_lcrp=EgZjaHJvbWUqCQgCECEYChigATIGCAAQRRg5MgkIARAhGAoYoAEyCQgCECEYChigATIJCAMQIRgKGKAB0gEKMzkwMDNqMGoxNagCALACAA&sourceid=chrome&ie=UTF-8)