Indian Agricultural Crop Production Analysis

(1997-2021)

Project Report

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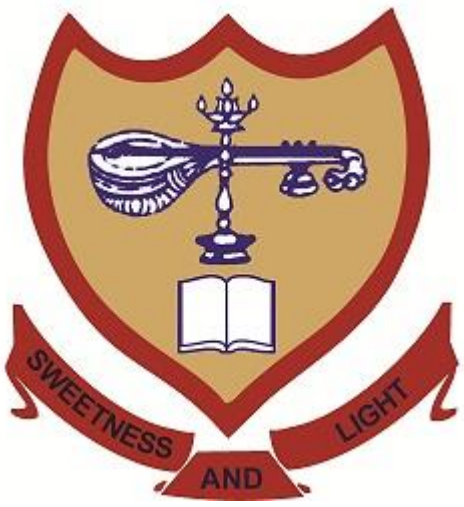

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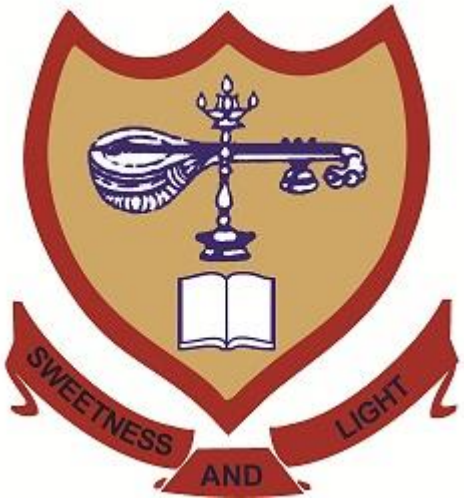


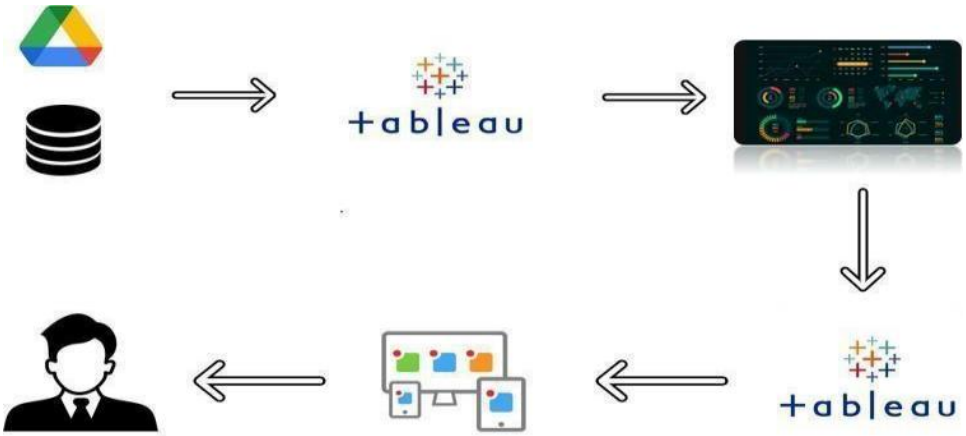
CONTENTS

1.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.

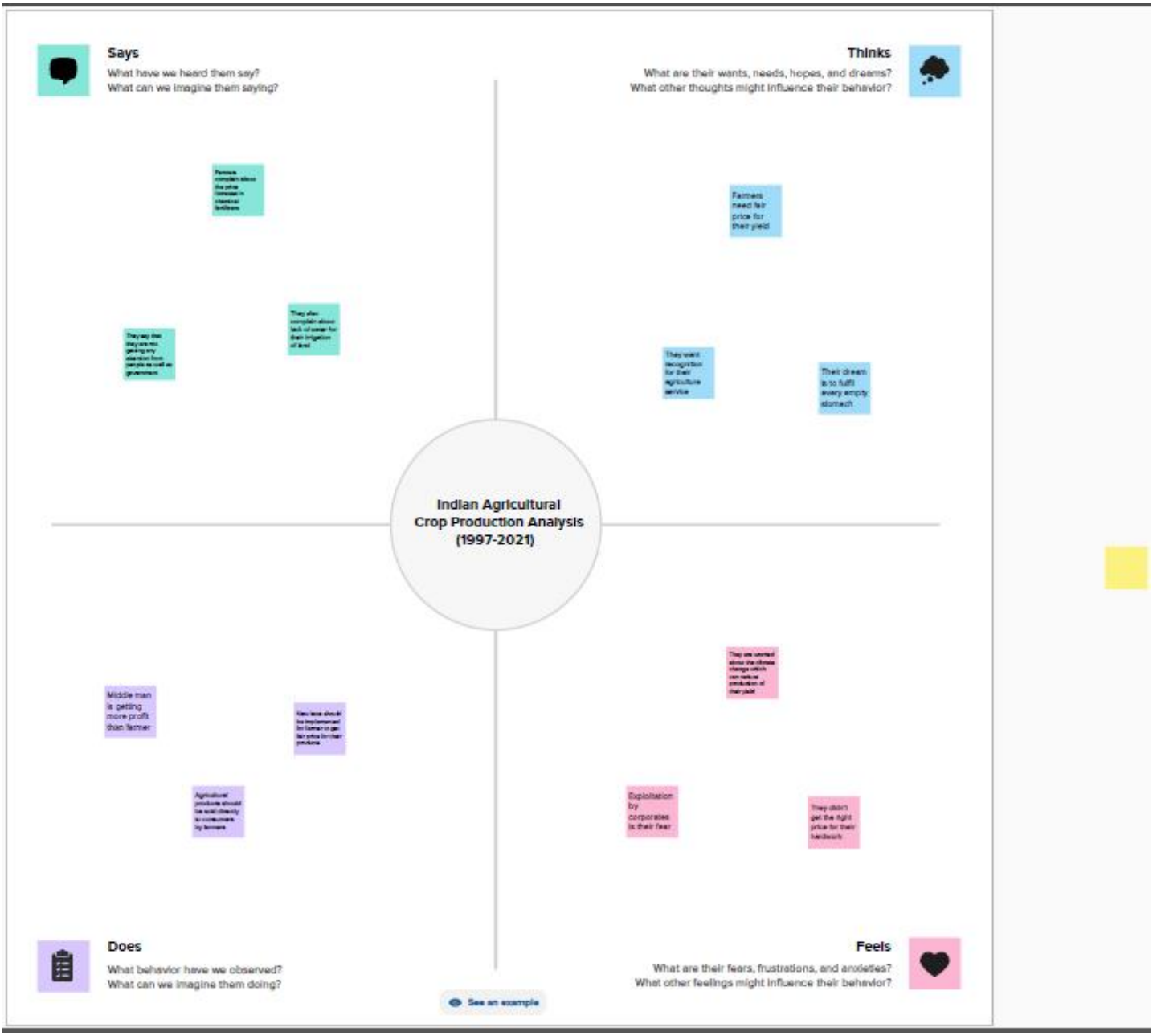
TECHNICAL ARCHITECTURE:



2.PROBLEM DEFINITION & DESIGN THINKING :

2.1 EMPATHY MAP

An Empathy Map is a tool used to help understand and empathize with the perspective of a particular user or customer. It is a visual representation of the user's attitudes, behaviors, emotions, and experiences that can be used to gain a deeper understanding of their needs and motivations The Empathy Map is typically divided into four quadrants "Says," "Thinks," "Does," and Feels." In each quadrant, the user's thoughts, feelings, actions, and spoken words are recorded to help build a more complete understanding of their perspective. The Empathy Map is often used in design thinking and user experience research to help inform the design of products or services that better meet the needs of the user.

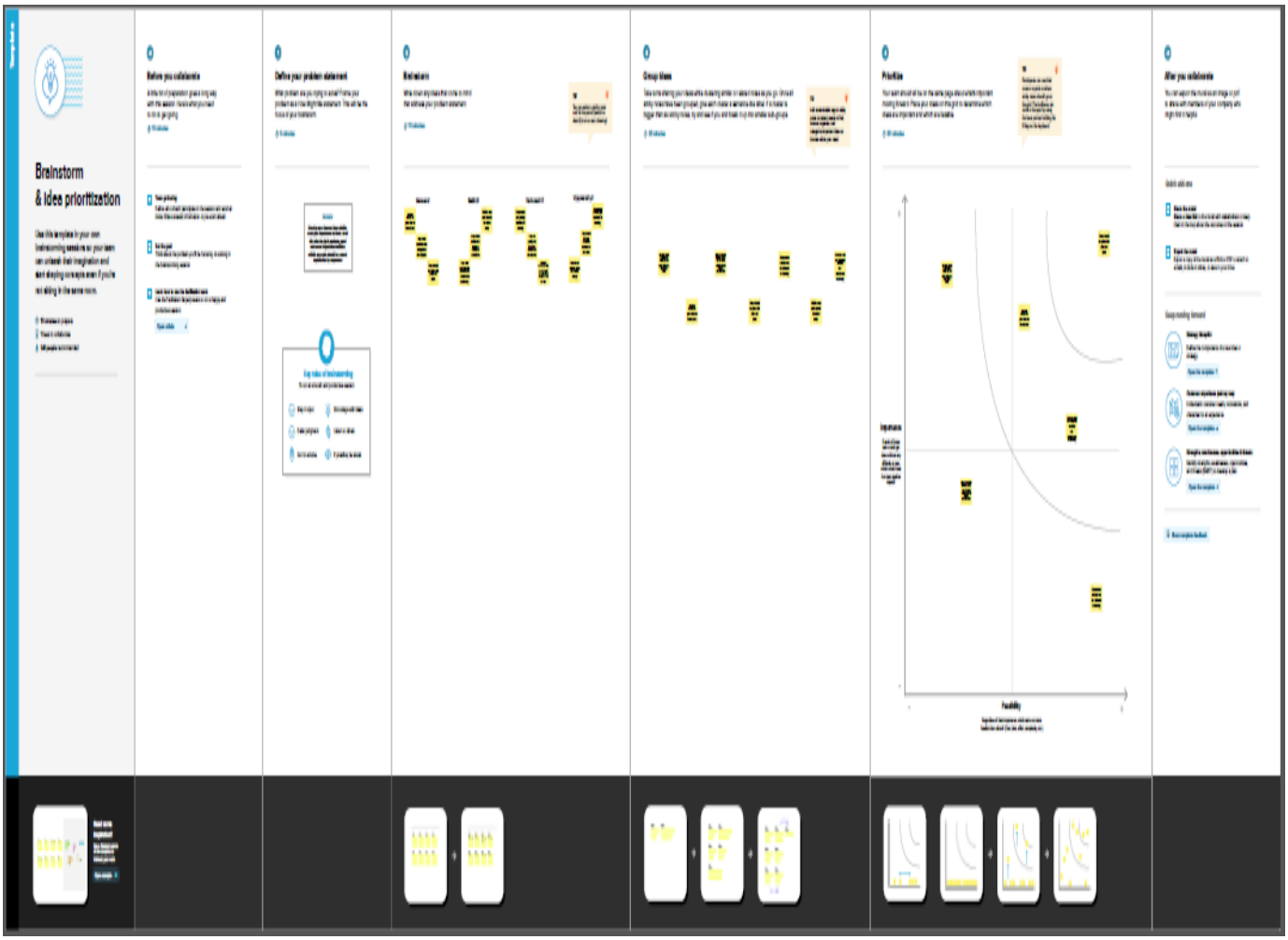

Says
What have we heard them say?
What can we imagine them saying?
Thinks
What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?
Farmers need fair price for their yield
Their dream is to fulfil every empty stomach
Middle man is getting more profit than farmer
Does
What behavior have we observed?
What can we imagine them doing?
Exploitation by corporates is their fear
Feels
What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?
Indian Agricultural Crop Production Analysis (1997-2021)
See an example

2.2 IDEATION AND BRAINSTORMING MAP

- Ideation and Brainstorming Maps are tools used to generate and organize ideas in a structured and visual way. They are commonly used in creative problem solving, innovation, and product design to generate a large numb
- Number of ideas and then organize them into meaningful categories.

- Ideation and Brainstorming Maps typically start with a central theme or problem statement in the center of the map. From there, branches are drawn out to represent different categories or subtopics related to the central theme. These categories can then be further expanded with additional branches to represent specific ideas.

- The purpose of an Ideation and Brainstorming Map is to encourage free thinking and generate as many ideas as possible. It allows participants to visually see how ideas are connected and to build upon each other's ideas. The map can then be used to prioritize and refine the most promising ideas. There are many variations of Ideation and Brainstorming Maps, including Mind Maps, Spider Maps, and Fishbone Diagrams.


Brainstorm
& idea prioritization
Before you collaborate
Define your problem statement
Brainstorm
Group ideas
Prioritize
After you collaborate

3.1 Results

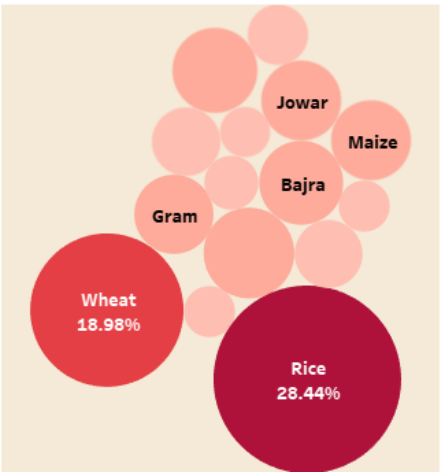
Creating a Dashboard in Tableau

- A dashboard is a collection of different kinds of visualizations or views that we create on Tableau .We can bring together different elements of multiple worksheets and put them on a single dashboard.

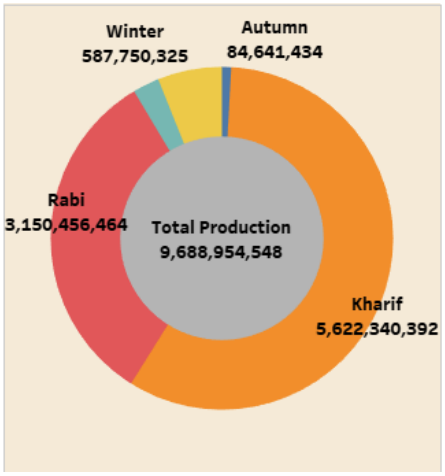
- The dashboard option enables us to import and add charts and graphs from worksheets to create a dashboard. On a dashboard, we can place relevant charts and graphs in one view and analyze them for better insights.

DASHBOARD

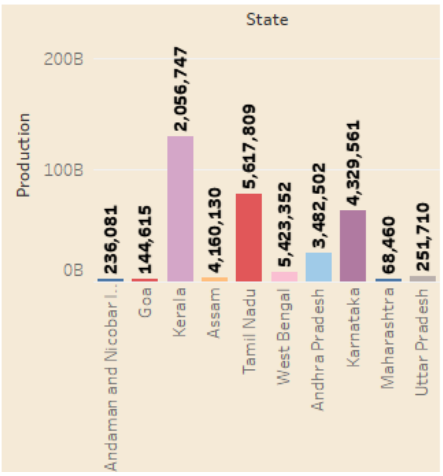
Crop Plantation by Area



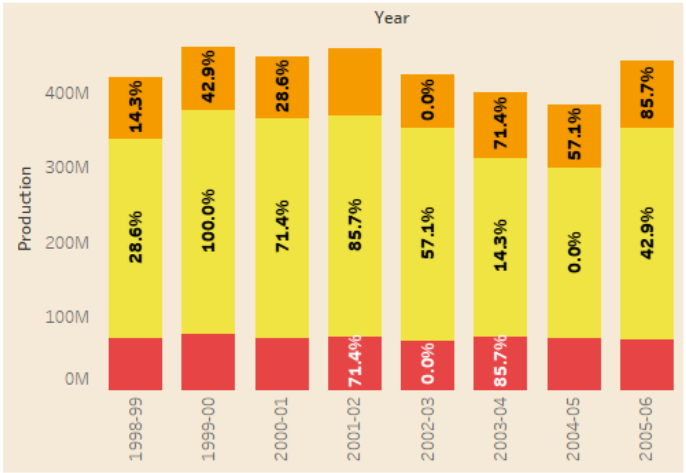
Season Wise Production



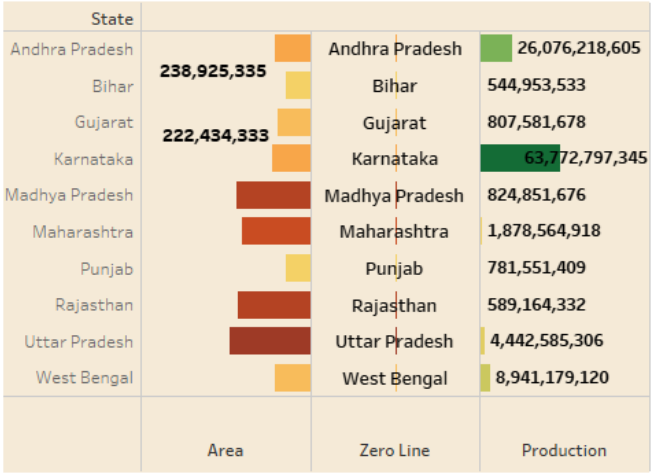
Production Based on State



Major Crops



Area VS Production



Story

Well, it is a sequence of different charts that combine to promote cohesive plot to its viewers. In essence, all these charts tell a day about the data which allows the viewers to form the conclusion. The story in Tableau\ contains story poems where each story point is either a work or a dashboard.

When you share a story-for example by publishing a workbook to Tableau Public, Tableau Server, or Tableau Clad-users can interact with the story to reveal new findings or ask new questions of the data

A. Options :

- For Adding A New Story Point: Choose Blank to add a new point or Duplicate to use the current story point as the starting place for your next pom

B. The Story Pane:

- Use this pane to drag dashboards, sheets, and test descriptions to your story sheet. This is also where you set the size of your story and display or hide the title

B. **The Layout Pane**: This is where you choose your navigator style, and display or hide the forward and back arrows

D. The Story Menu: Use this menu in Tableau Desktop to format the story or copy or export the current story point as an image. You can also clear the entire story here or show or hide the navigator and story tale

E. The Story toolbar: This toolbar appears when you mouse-over the navigator area. Use it to revert changes, apply updates to a story point. delete a story point, or create a new story point out of the current, customized one

F. The navigator: The navigator allows you to edit and organize your story points. It's also how your audience will step through your story. To change the style of the navigator, use the Layout pane.

STORY 1

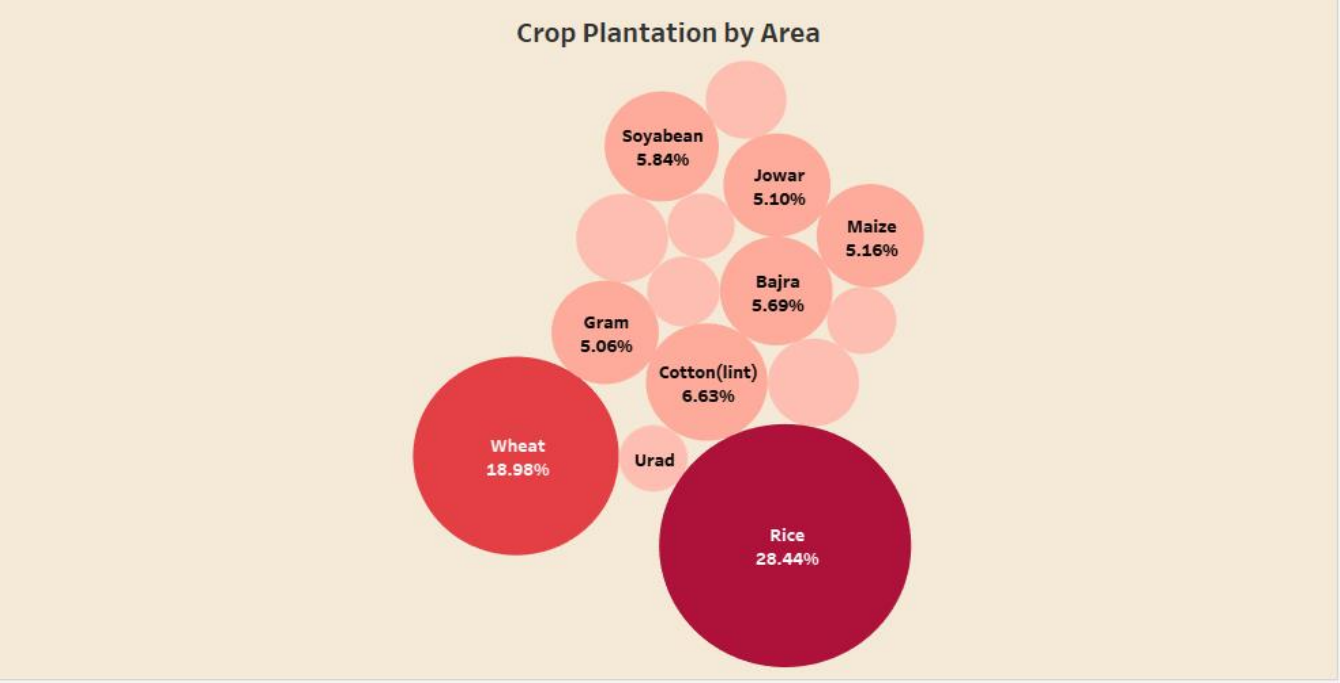
Stories

Crop production based on area.Rice has the highest percentage of filed area than others.

Agricultural production based on states.Tamilnadu is the fifth highest producing state.

Top 3 crops .Sugercane is the highest producer among rice and wheat.

Area VS Producti states with areas production and U



STORY 2

Stories

Crop production based on area.Rice has the highest percentage of filed area than others.

Agricultural production based on states.Tamilnadu is the fifth highest producing state.

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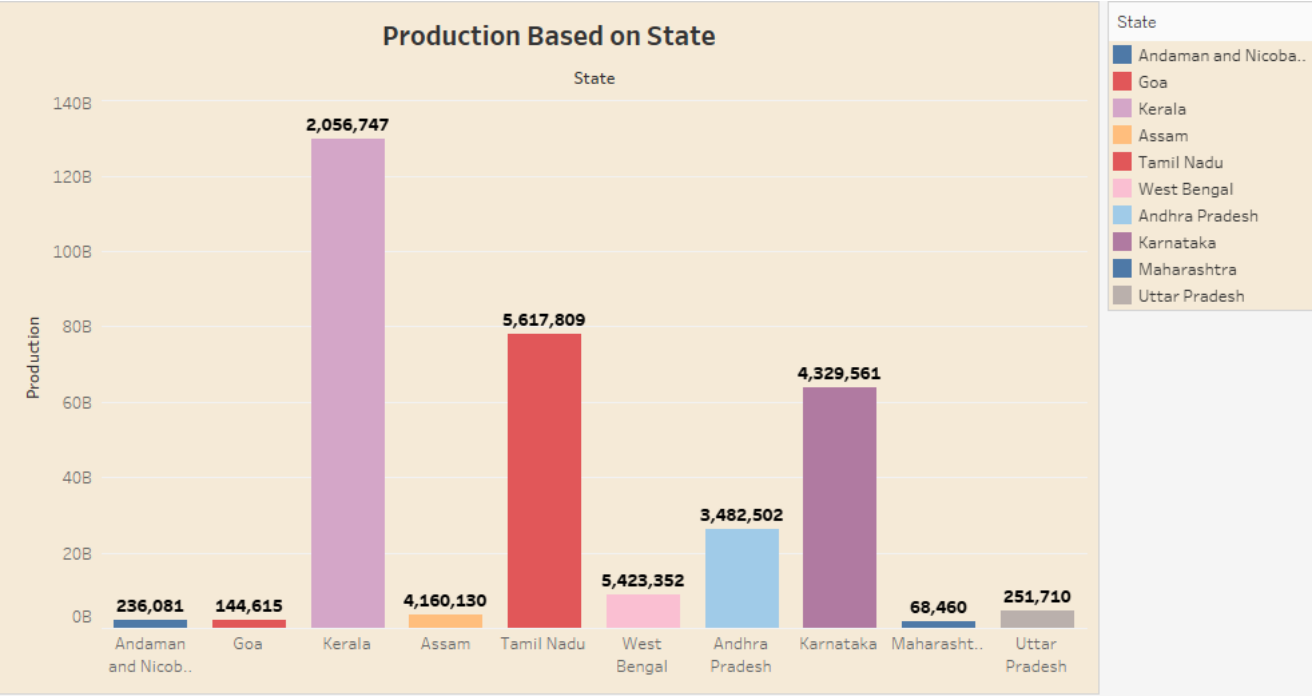


STORY 3

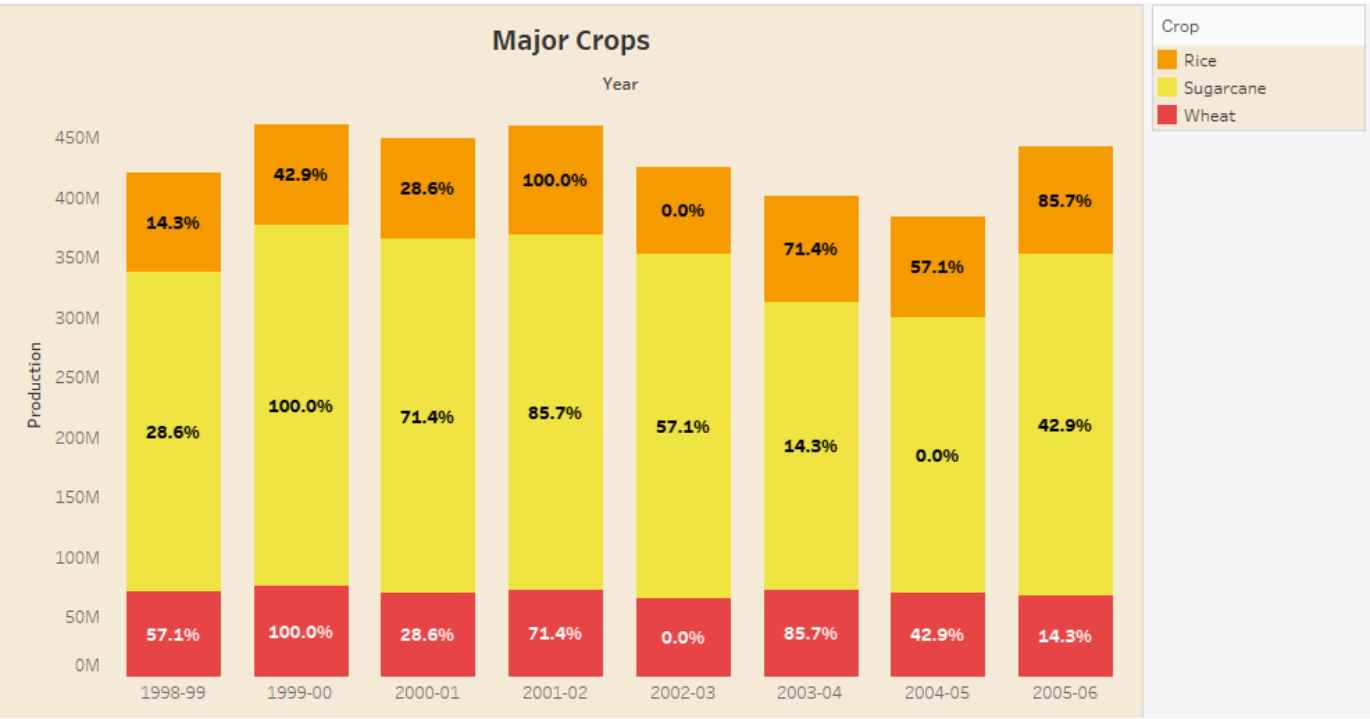
Stories

gricultural production based on ates.Tamilnadu is the fifth highest oducing state.

Top 3 crops .Sugercane is the highest producer among rice and wheat.

Area VS Production.Production based on states with areas.Karnataka has the highest production and Uttar Pradesh has the

Season wise producti total production prod seasons.Kharif has th



STORY 4

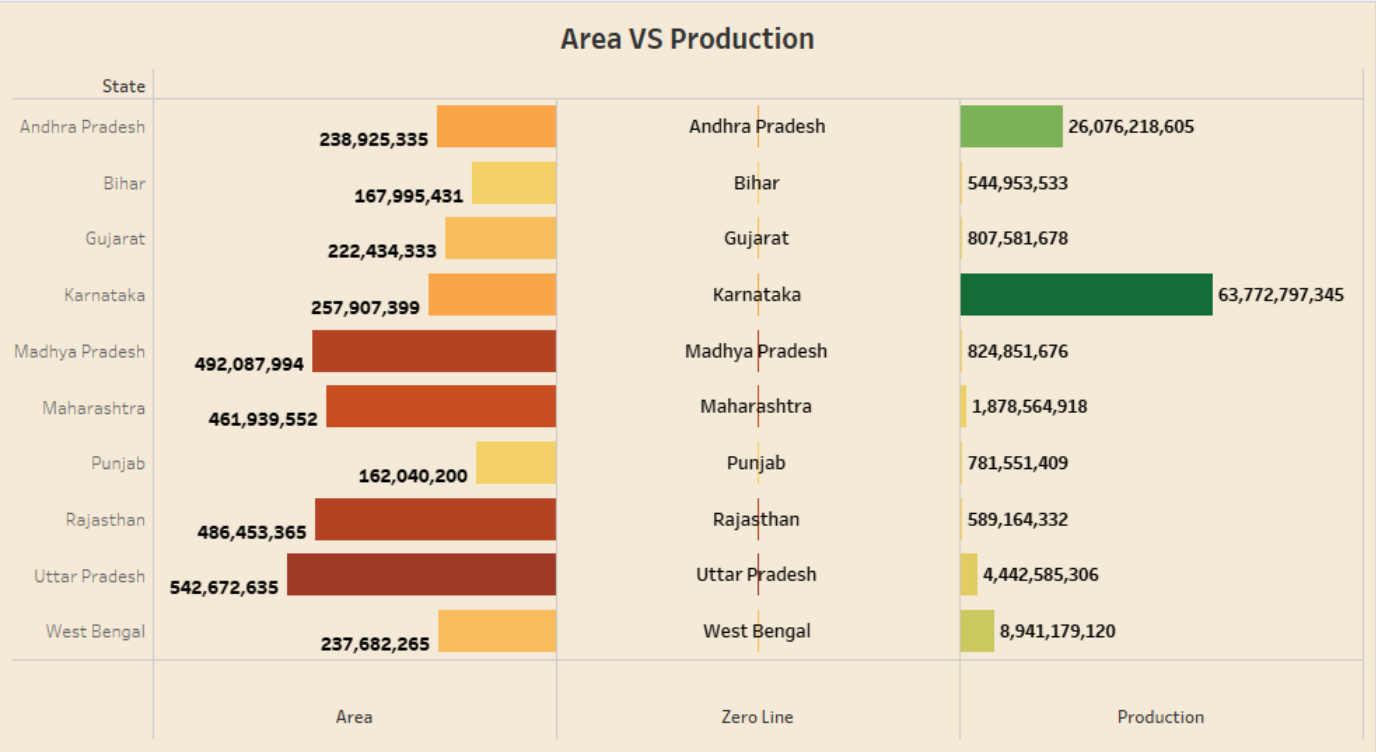
Stories

ed on highest

Top 3 crops .Sugercane is the highest producer among rice and wheat.

Area VS Production.Production based on states with areas.Karnataka has the highest production and Uttar Pradesh has the

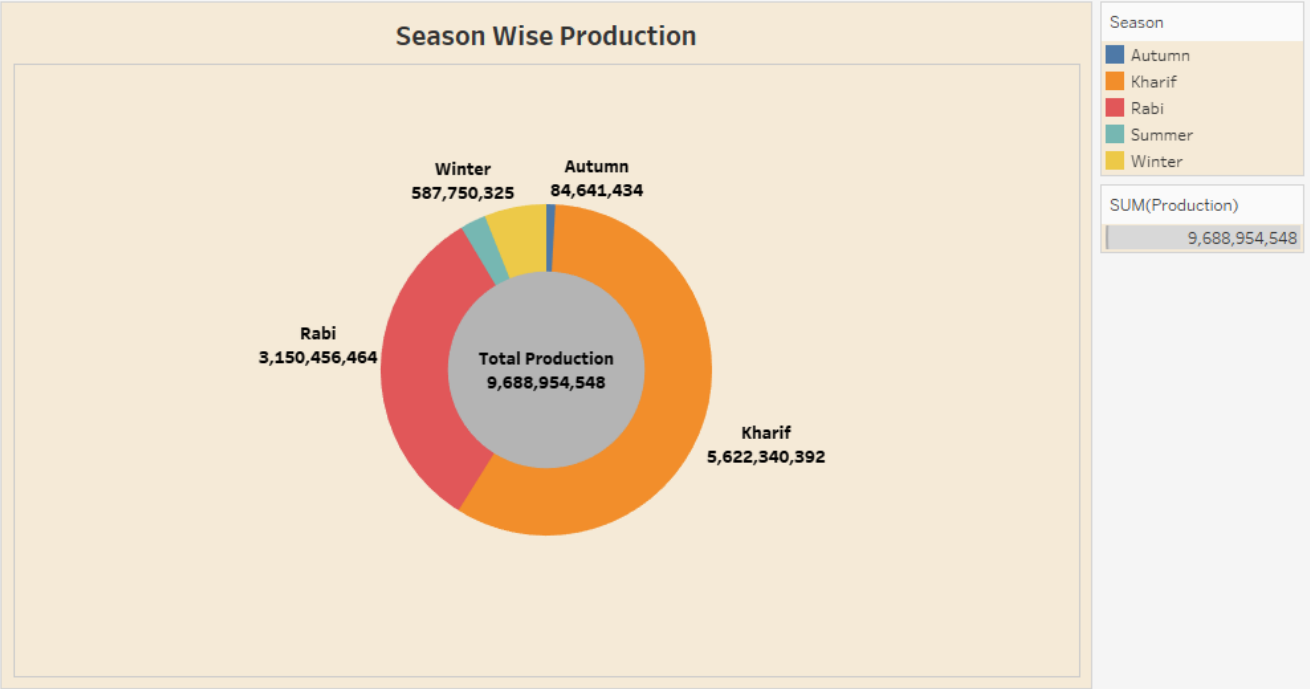
Season wise production.This tells about the total production produced during the given seasons.Kharif has the highest production



STORY 5

Stories

ed on highest | Top 3 crops .Sugercane is the highest producer among rice and wheat. | Area VS Production.Production based on states with areas.Karnataka has the highest production and Uttar Pradesh has the | Season wise production.This tells about the total production produced during the given seasons.Kharif has the highest production



4. ADVANTAGES AND DISADVANTAGES

ADVANTAGES

Today, the importance of agriculture in everyday life can't be minimized. Without the agriculture sector, activities such as getting dressed for work and cleaning the home wouldn't be possible. Here are examples of the agricultural products we use in our everyday lives:

- **Shelter**. Wood and plant-based materials, such as bamboo, can be used for indoor décor and construction materials.
- **Morning routine.** Mint is often an ingredient in toothpaste, adding flavor while brushing your teeth, and the caffeine in coffee that keeps you awake is derived from the coffee bean.
- **Dressing up.** In addition to cotton, clothing can be manufactured from hemp, ramie, and flax. Bio-based materials can be used to produce grooming products such as skin creams and shampoos.
- **Cleaning.** Two types of chemicals used in detergents, cleaning products, and bath or hand soap — surfactants and solvents — can be produced from biomass.
- **Driving to work.** Plants make it possible to get to and from work. Think of rubber (sourced from rubber trees) and biodiesel fuel, which often includes ethanol (sourced from corn).
- **Entertainment.** Paper from trees enables you to write, and some musical instruments, such as reed instruments, require materials made from plants.
- **Education.** From pencils (still often made of wood) to paper textbooks, students rely on agricultural products every day.

DISADVANTAGES

Problems faced by the farmers

- Over-dependence on unreliable rain and lack of irrigation facilities had led to a decline in agricultural output.
- Poverty and illiteracy of the farmers prevent them from making large-scale capital investments and adopting scientific methods of cultivation.
- Small land holdings due to fast-growing population which leads to fragmentation of land at quick succession. As a result, the size of the plot becomes smaller with every passing generation this greatly hinders the mechanism of farming.
- Erosion of soil by heavy rain, floods, insufficient vegetation cover etc., reduces farm productivity.
- Inadequate irrigation facilities and poor management of water resources have led to a great decline in agricultural productivity.

5.APPLICATIONS

Role of agriculture in Indian economy

1. Share in National Income
2. Largest Employment Providing Sector
3. Contribution to Capital formation
4. Providing Raw Material to industries
5. Market for Industrial Products

Importance in International Trade

1. Share in national income
2. Source of employment
3. Provision of food grains
4. Supply of raw materials to industrial sector
5. Market for industrial product
6. Earner of foreign exchange

6.CONCLUSION

Modern agriculture has been developed over the last century, and its impact on the environment is significant. The main forms of modern agriculture are industrial farming, which involves large-scale monoculture, and organic farming, which focuses on small-scale diversified farms. Agriculture has given so much to society. But it has its own pros and cons that we can't overlook. Furthermore, the government is doing his every bit to help in the growth and development of agriculture.

7.FUTURE SCOPE

Agriculture is good for the future as it is expected to use advanced technologies and innovations to produce more food with limited land and resources, increase efficiency on farms, and become more profitable, efficient, safe, and environment friendly. Indian agriculture can help the nation tackle three of its biggest challenges like feeding a huge and expanding population, ensuring sufficient energy supplies and curbing emissions. Still, meeting these goals will require a coordinated effort with alignment across policy, investment and agricultural research.