

PROJECT REPORT

INDIA'S AGRICULTURAL CROP PRODUCTION

1.INTRODUCTION:

1.1 Overview

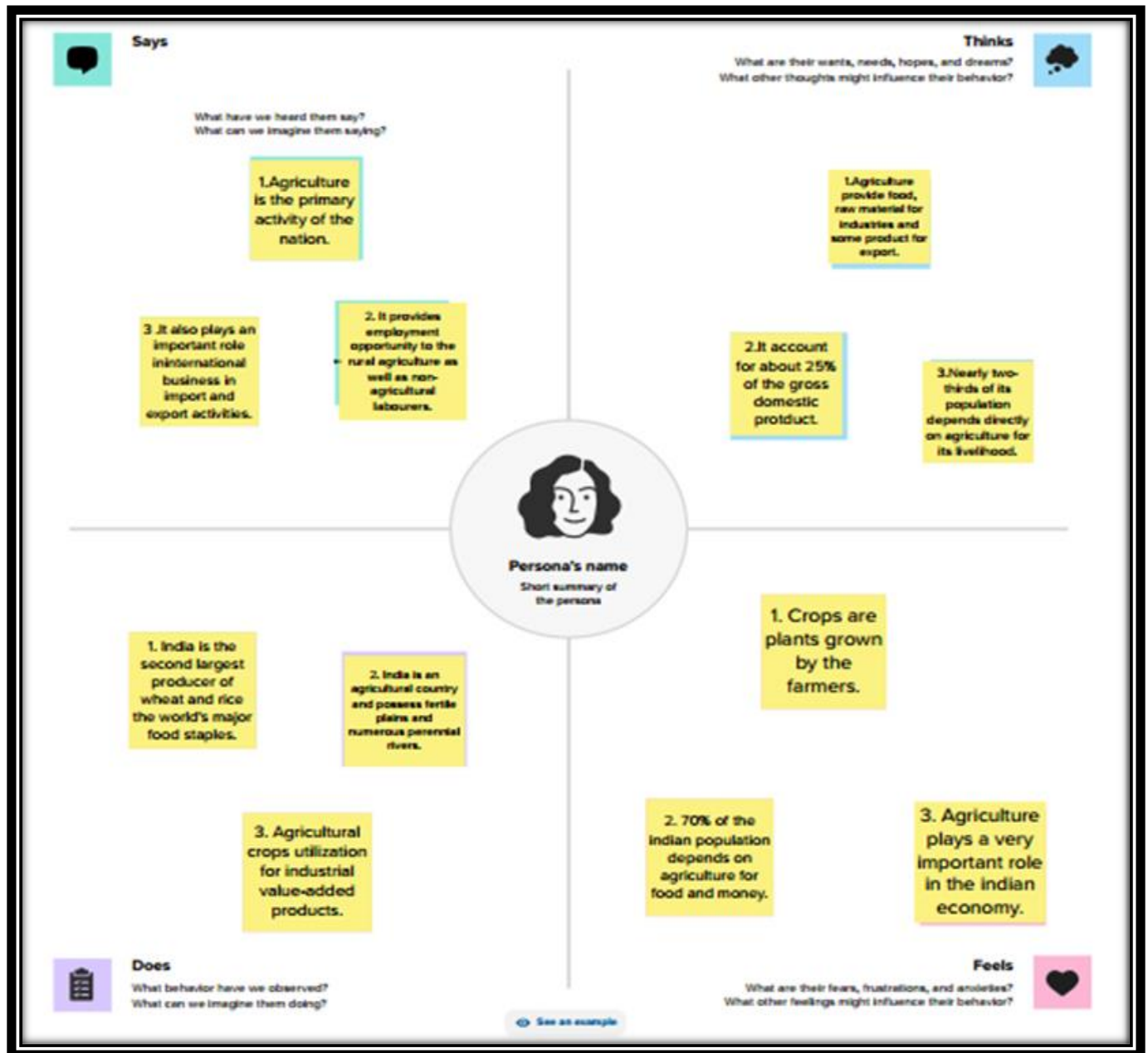
Data science can be used to map out digital soil and crops. This information can be used by farmers to make more efficient use of their land and by agronomists to better understand the needs of crops.

1.2 Purpose

In data analytics of “India’s agricultural crop and production” in tableau allows you to preparation , analyze , collaborate, and share your big data insights. Tableau excels in self-service visual analysis ,allowing people to ask new questions of governed big data and easily share those insights across the organization.

2.PROBLEM DEFINITION AND DESIGN THINKING:

2.1 Empathy Map



2.2 Ideation and Brainstorming Map

Brainstorm & Idea prioritization

Use this template in your next brainstorming session or your team can submit their suggestions and start shaping concepts even if you're not sitting in the same room.

- 1. Welcome to the session
- 2. Welcome to the session
- 3. All people recommended

Before you collaborate

A little bit of preparation goes a long way with the session. Don't forget to prepare the session agenda and the session materials.

- 1. Welcome to the session
- 2. Welcome to the session
- 3. All people recommended

Define your problem statement

What problem are you trying to solve? Have your problem statement ready for the session. This will be the focus of your brainstorm.

- 1. Welcome to the session
- 2. Welcome to the session
- 3. All people recommended

Brainstorm

Write down any ideas for solving the problem. The ideas you write down are the focus of your brainstorm.

Problem	Solution	Impact	Feasibility
1. Welcome to the session	2. Welcome to the session	3. All people recommended	4. All people recommended

Group ideas

Now it's time to share your ideas with the group. Write down any ideas for solving the problem. The ideas you write down are the focus of your brainstorm.

- 1. Welcome to the session
- 2. Welcome to the session
- 3. All people recommended

Prioritize

Now it's time to share your ideas with the group. Write down any ideas for solving the problem. The ideas you write down are the focus of your brainstorm.

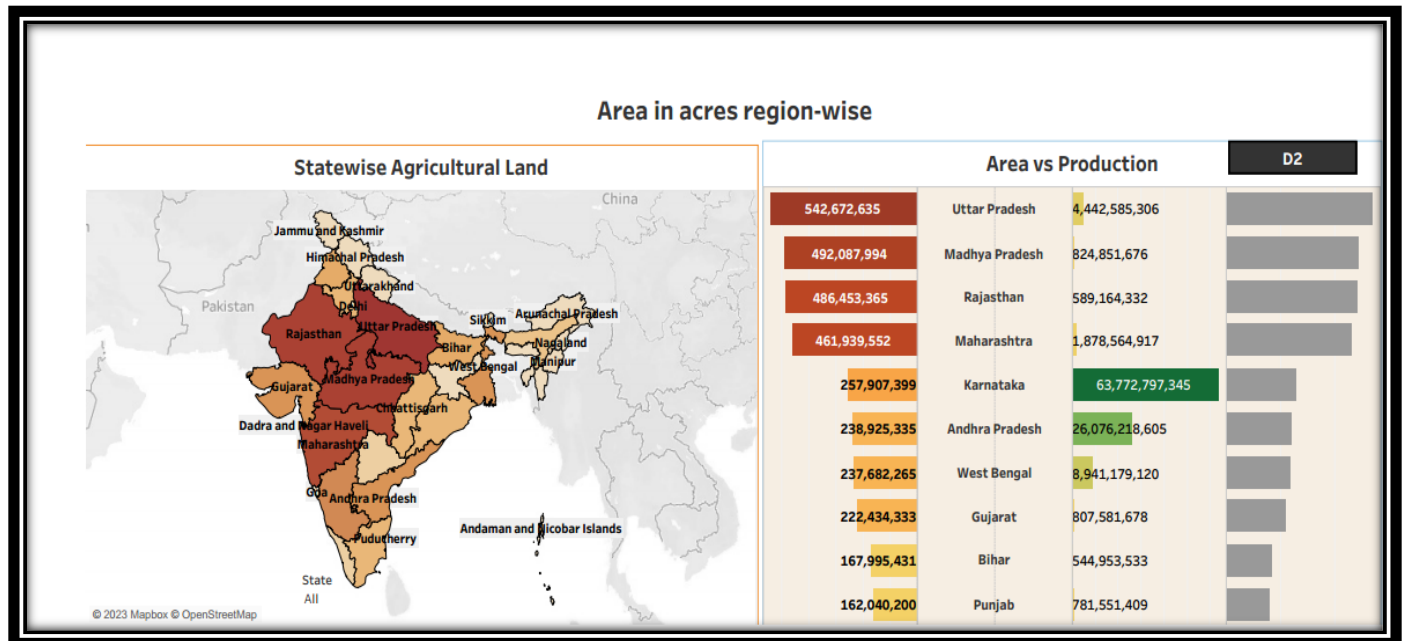
After you collaborate

Now it's time to share your ideas with the group. Write down any ideas for solving the problem. The ideas you write down are the focus of your brainstorm.

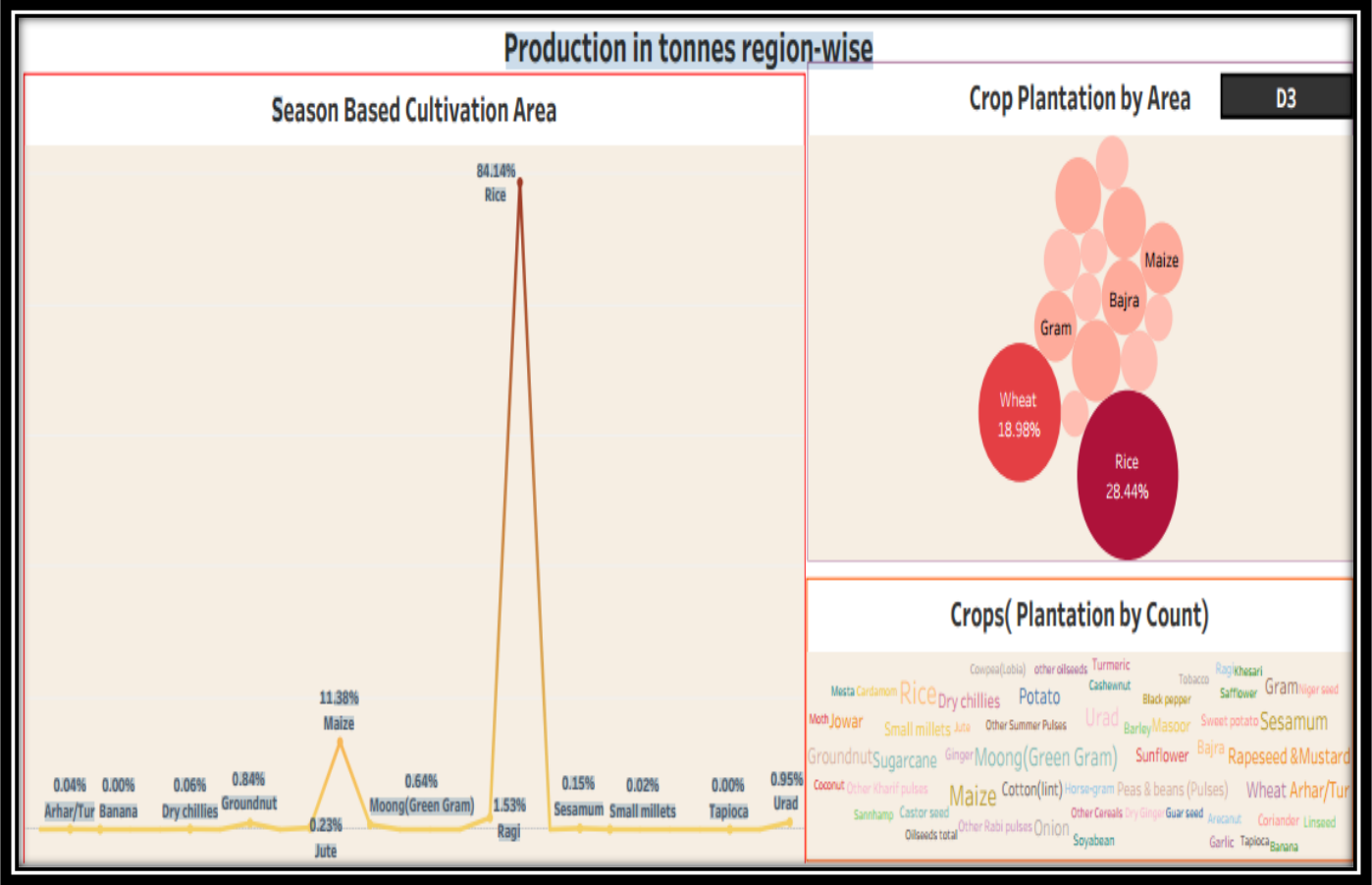
- 1. Welcome to the session
- 2. Welcome to the session
- 3. All people recommended

3.RESULT:

Dashboard: 1



Dashboard: 2



Dashboard:3

Yield by Season

D1

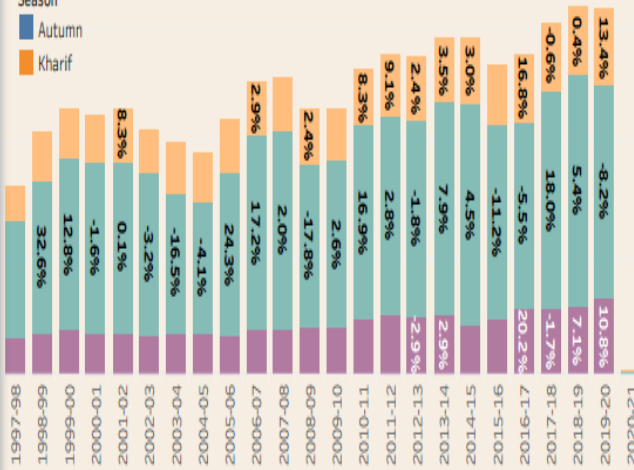
8,764
Kharif

26,457
Kharif

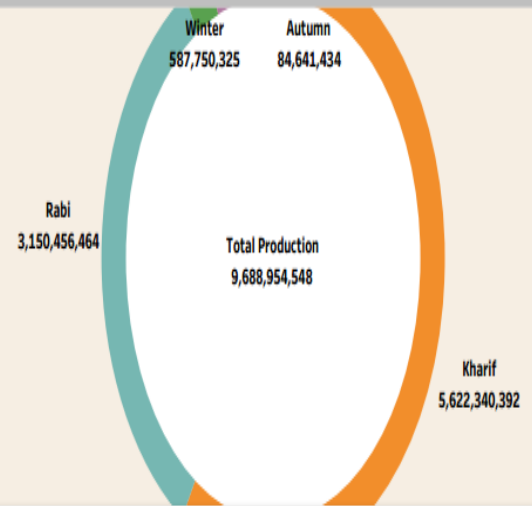
1997-98 1998-99 1999-00 2000-01 2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20

Major Crops

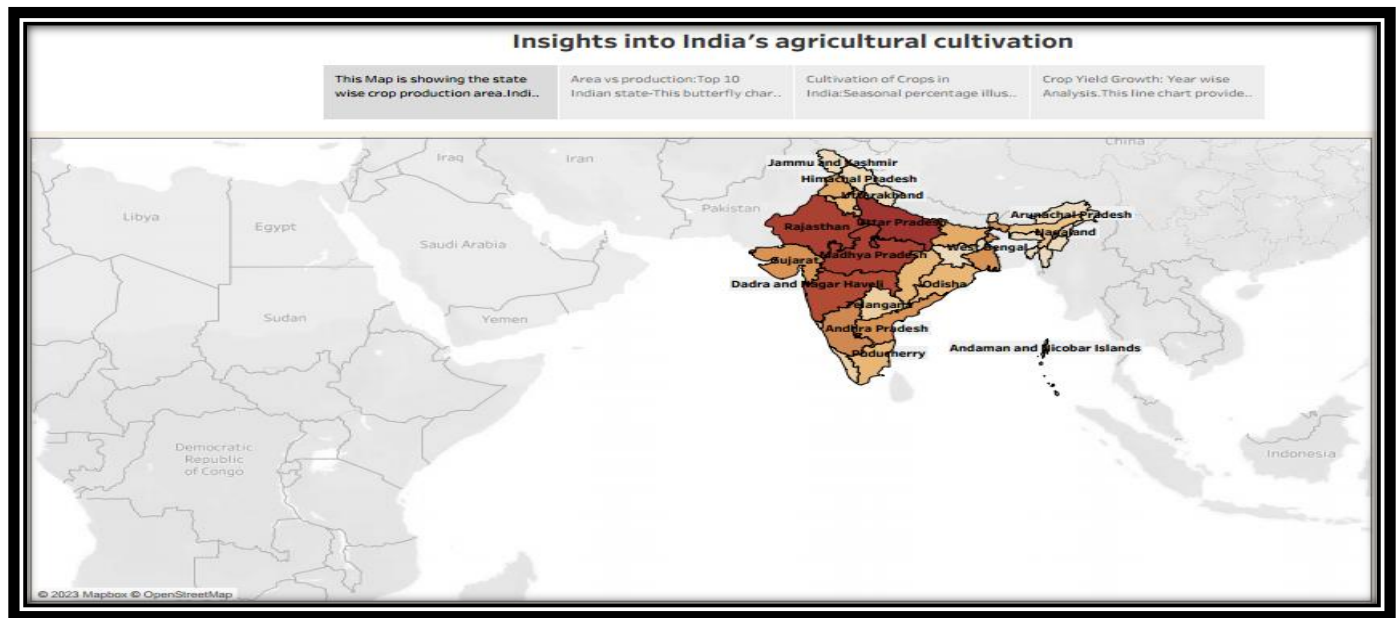
Season
Autumn
Kharif



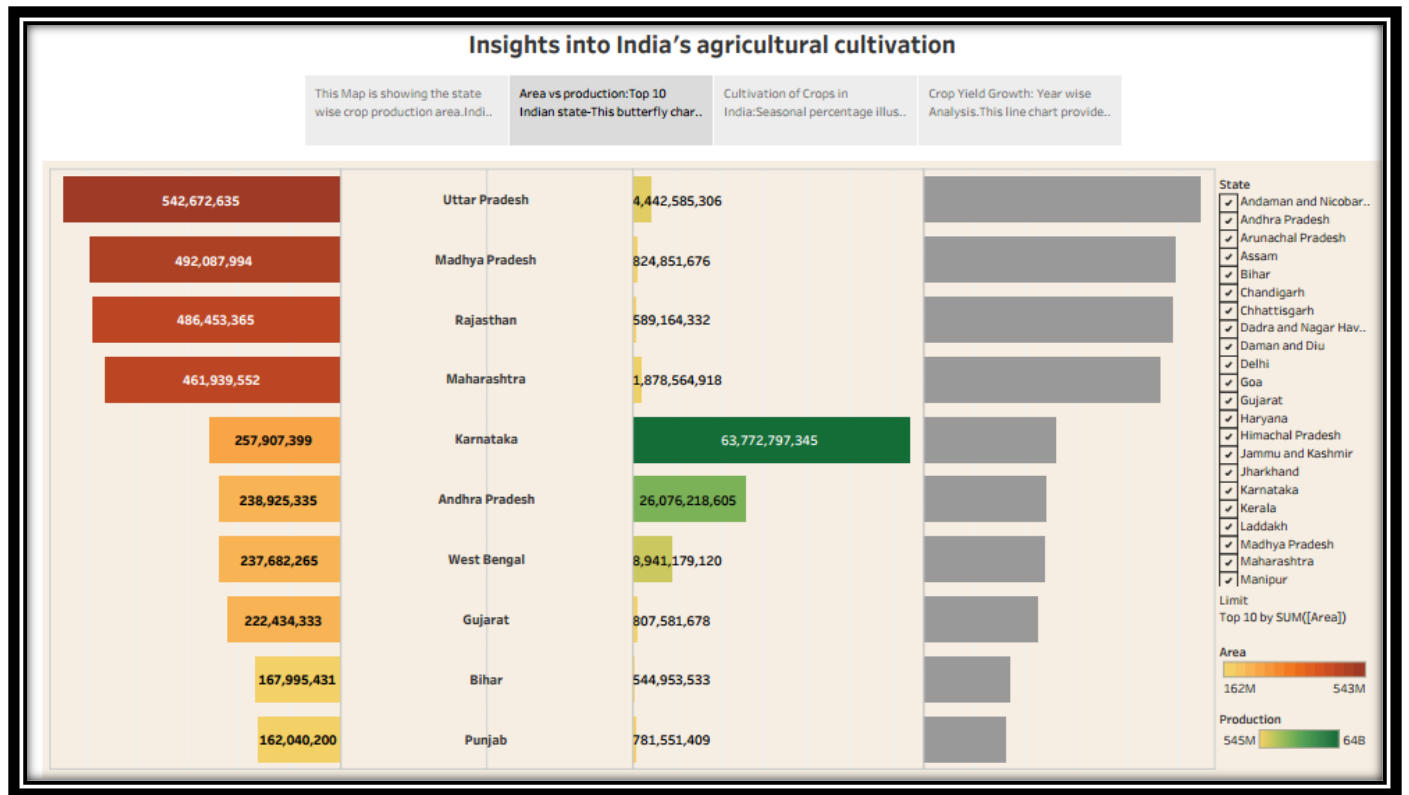
Season wise Production



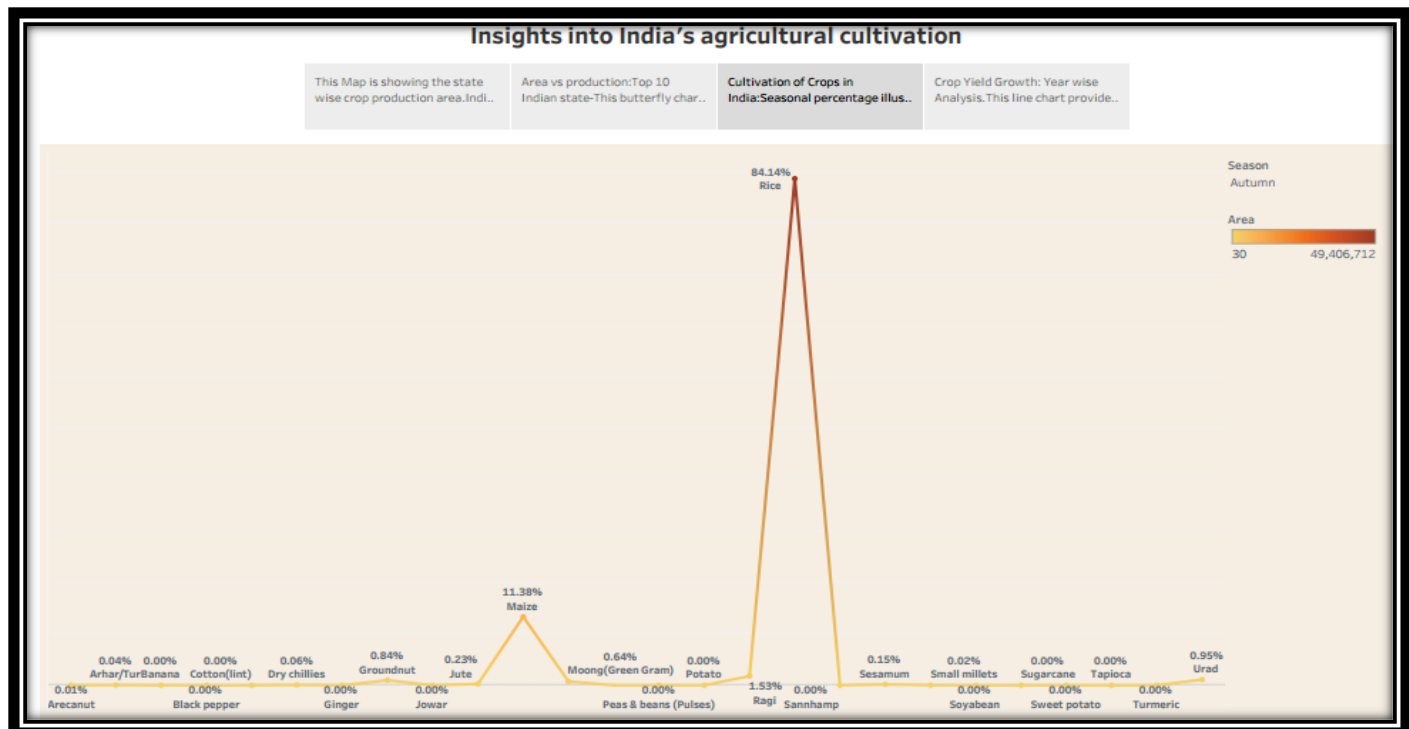
Story:1



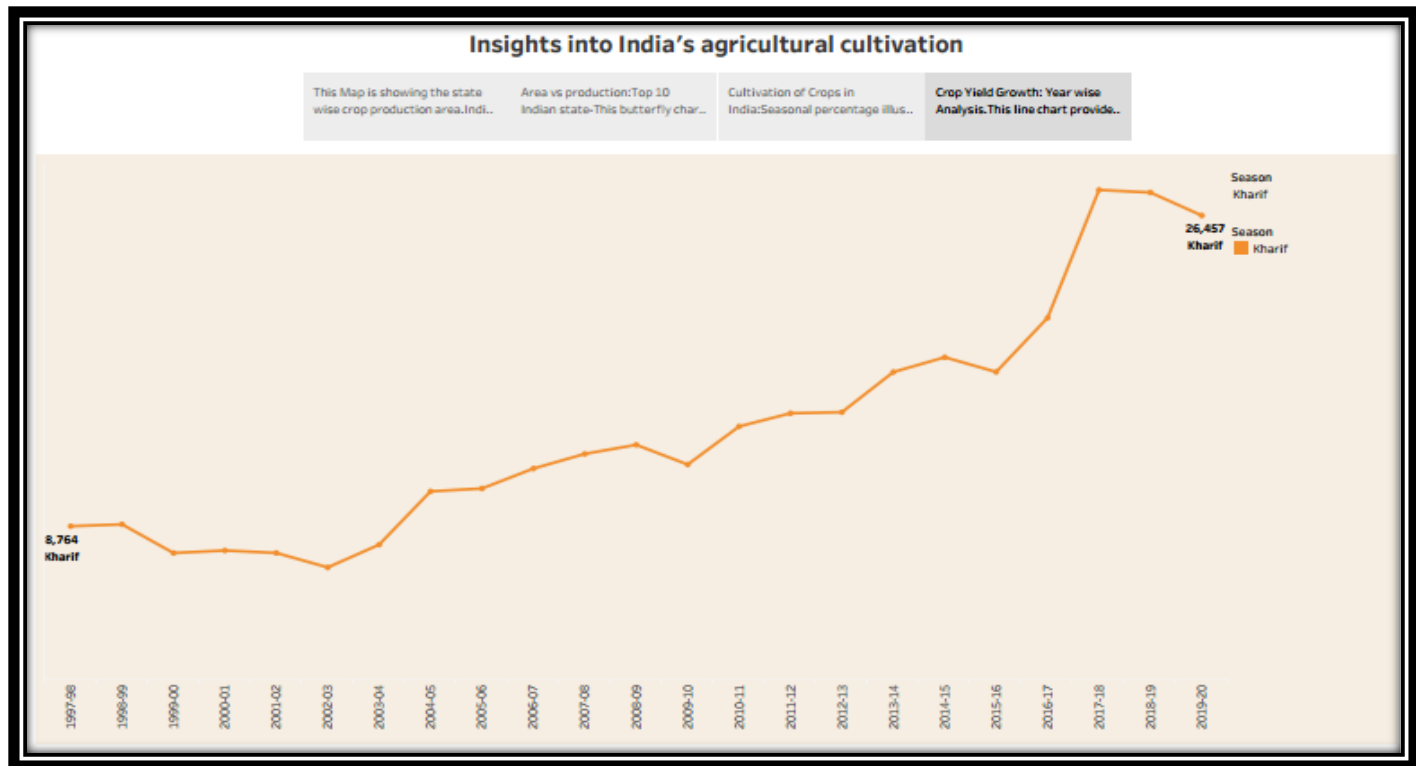
Story:2



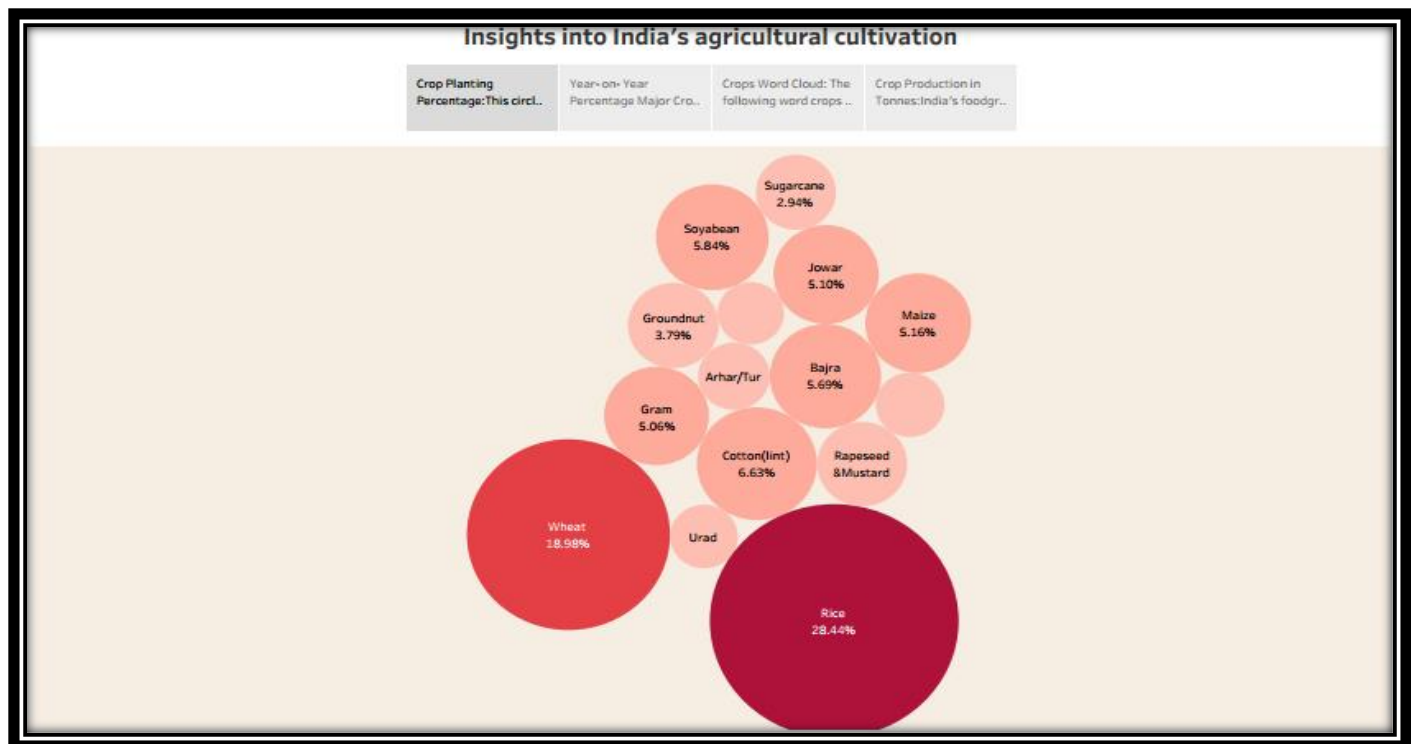
Story:3



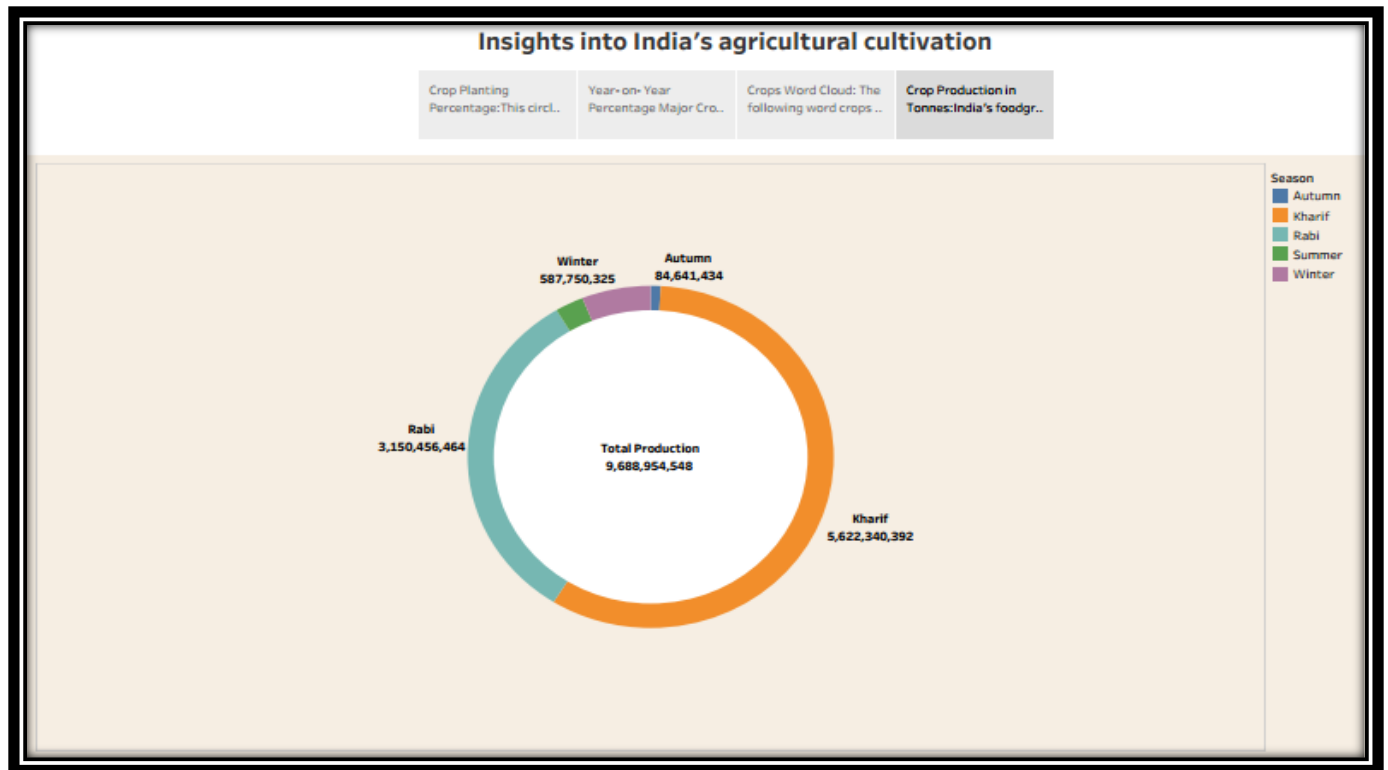
Story:4



Story:5



Story:6



4. ADVANTAGES AND DISADVANTAGES:

Advantages:

1. Crop Monitoring

Data Science is being used to create more sophisticated crop monitoring systems. Farmers can now use sensors and drones to collect data about their crops, which can be analyzed to identify problems early on and take corrective action.

2. Water Management

One of the most important [applications of Data Science](#) in agriculture is water management. By collecting data about weather patterns, soil moisture levels, and irrigation systems, farmers can optimize their water usage to reduce wastage and lower costs.

3. Food Safety

Finally, Data Science is also playing a role in food safety. By analyzing food-borne illness data, agricultural scientists can identify risk factors and develop strategies for reducing the spread of disease-causing bacteria. This helps to protect consumers and ensure that food products are safe for consumption.

4. Soil Analysis

Data Science in agriculture is also being used to understand soil composition and fertility better. By analyzing data from sensors and samples, agricultural scientists can develop more accurate models of soil behavior. This helps farmers make better irrigation, fertilization, and other soil [management](#) practices.

Disadvantages:

- i. The awareness of these technologies to farmers is quite uncommon.
- ii. The variation in data about the harvest and production, weather change, disease, and insect damage.
- iii. This data science increase the use of pesticides and fertilisers, which also contribute to global warming.
- iv. Unintended consequences also need to be taken into account. For example, an AI system programmed to deliver the best crop yield in the short term might ignore the environmental consequences of its endpoint, leading to overuse of fertilizers and soil erosion in the long term.

5.APPLICATION:

1. Digital Soil and Crop Mapping

Data Science can be used to map out digital soil and crops. This information can be used by farmers to make more efficient use of their land and by agronomists to better understand the needs of crops. In addition, Data Science can be used to predict weather patterns and forecast crop yields.

2. Weather Prediction to Improve Yield

- i. Data Science is helping farmers to predict weather patterns and forecast crop yields with increasing accuracy. In the past, farmers would make decisions based on their experience and intuition about the weather.
- ii. With Data Science, farmers can now access historical data and use it to identify patterns in weather patterns.

6.CONCULISON:

1.The role of data analytics and decision support systems in crop health monitoring has been transforming the agricultural landscape in India. With the help of technology and data-driven insights, farmers are empowered to make informed decisions, decrease losses, and enhance resource allocation.

7.FUTURE SCOPE:

- i. This will enable them to make more informed decisions about when and how to plant, fertilize, and harvest their crops.

- ii. Big data provides farmers granular data on rainfall patterns, water cycles, fertilizer requirements, and more.
- iii. It can help to issue of tackle the issue related to food security, while maintaining the sustainability of farming.
- iv. Precision farming with the help of Big data analytics can address both economic and nourishment issues that encompasses production agribusiness today.