## PROJECT TITLE :

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

# 1. INTRODUCTION :

Agriculture is the back bone of our country's economy. Agriculture means the cultivation of crops for food and fodder .Crop production is a branch of agriculture, which includes the cultivation of crops(rice, wheat , maize, sugarcane, cotton,etc..) , vegetables and fruit growing etc, ...

## 1.1 Overview

In this project Agriculture crop production in India plays a vital role. Agriculture is an evolutionary process that consists of activities such as the production of food , fibers , feed and raising of domesticated animals to fulfill the demand of the population .Crop production is a branch of agriculture that deals with the production of crops for food and fiber. Crop production is a common agricultural practice followed to grow and produce crops to use as food and fiber. This practice includes all the feed sources that are required to maintain and produce crops.

## 1.2 Purpose

The main purpose of the agricultural crop production is Source of Food. It Supporting livelihoods through food, habitat, and jobs; and also prodiving a raw materials for food and other products; and building strong economies through trade. Agriculture is the practice of cultivating natural resources to sustain human life and provide economic gain . Crop production is mainly used to contribute the environmental conservation and improvement in order to achieve ecological balance, minimize the global warming, and promote human and animal health , and To establish marketing facilities for agricultural commodities in order to prevent the post –harvest losses and distressed sales.

# 2. PROBLEM DEFINITION &DESIGN THINKING :

## 2.1 Empathy Map

## Says

What have we heard them say?
What can we imagine them saying?

Agriculture provides most of the world's food and fabrics

These products, as well as the agricultural methods used, may vary from one part of the world to another.

Agriculture also provides wood for construction and paper products

## Thinks

What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?

Agriculture crop production is the primary source of food for humans.

Agricultural Crop production is the process of growing crops for domestic and commercial purposes.

It accounts for about 25% of Gross Domestic Product.

**Agriculture**

Agriculture is one of the most important aspects of everyone's life

Crop production is a common agricultural practice followed by worldwide farmers to grow and produce crops to use as food and fibre

Agriculture is the art and science of cultivating the soil, growing crops, and raising livestock.

## Does

What behavior have we observed?
What can we imagine them doing?

It Provides employment opportunity to the rural agricultural as well as Non-agricultural labourers.

It supporting livelihoods through food, habitat and jobs;and Building strong economies through trade.

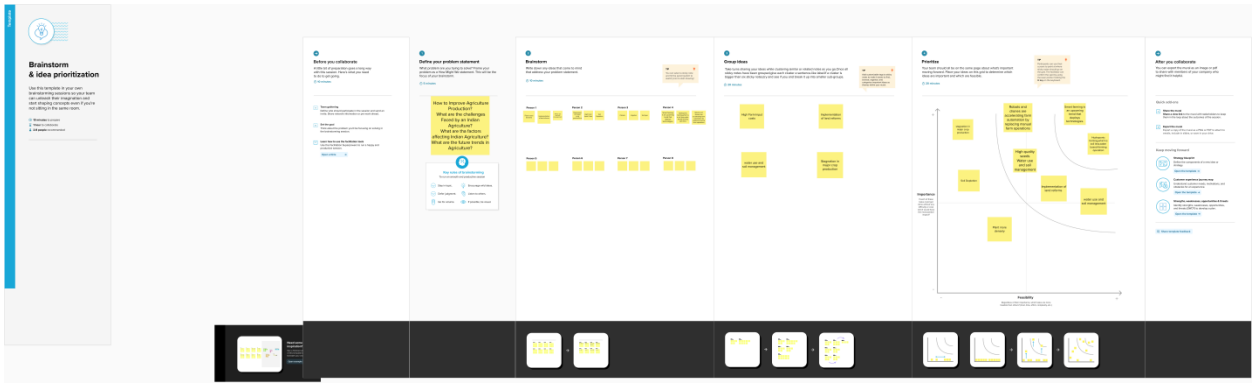
Agricultural crop production also plays an important role in International Business in Import and Export activities.

## Feels

What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?

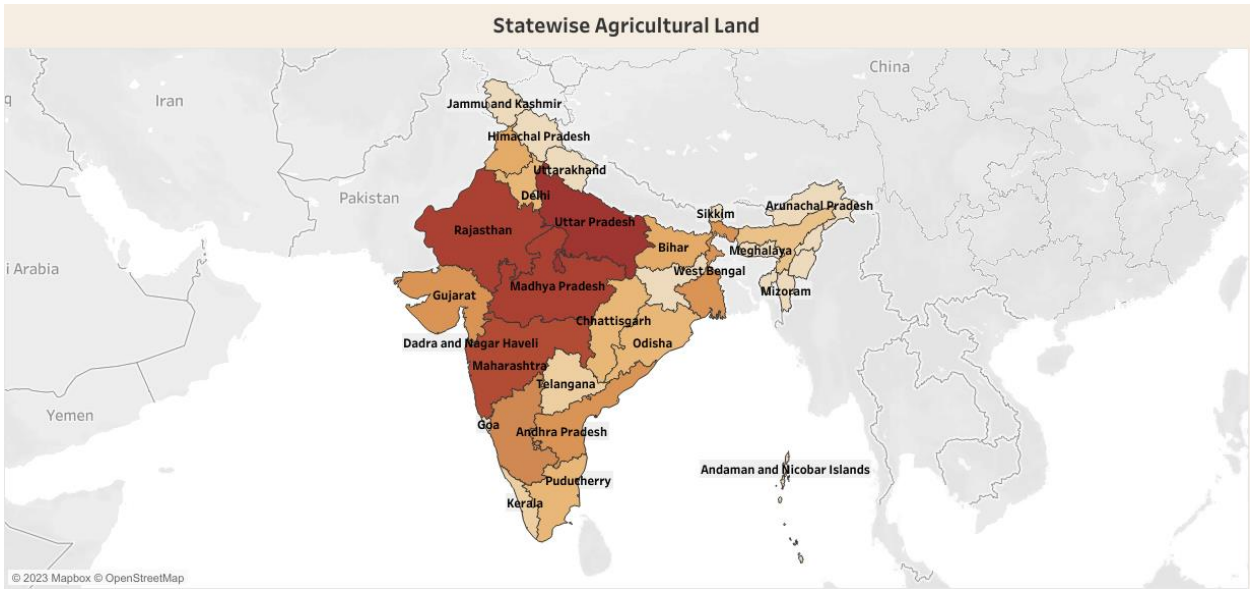
See an example

## 2.2 Ideation & Brainstroming Map

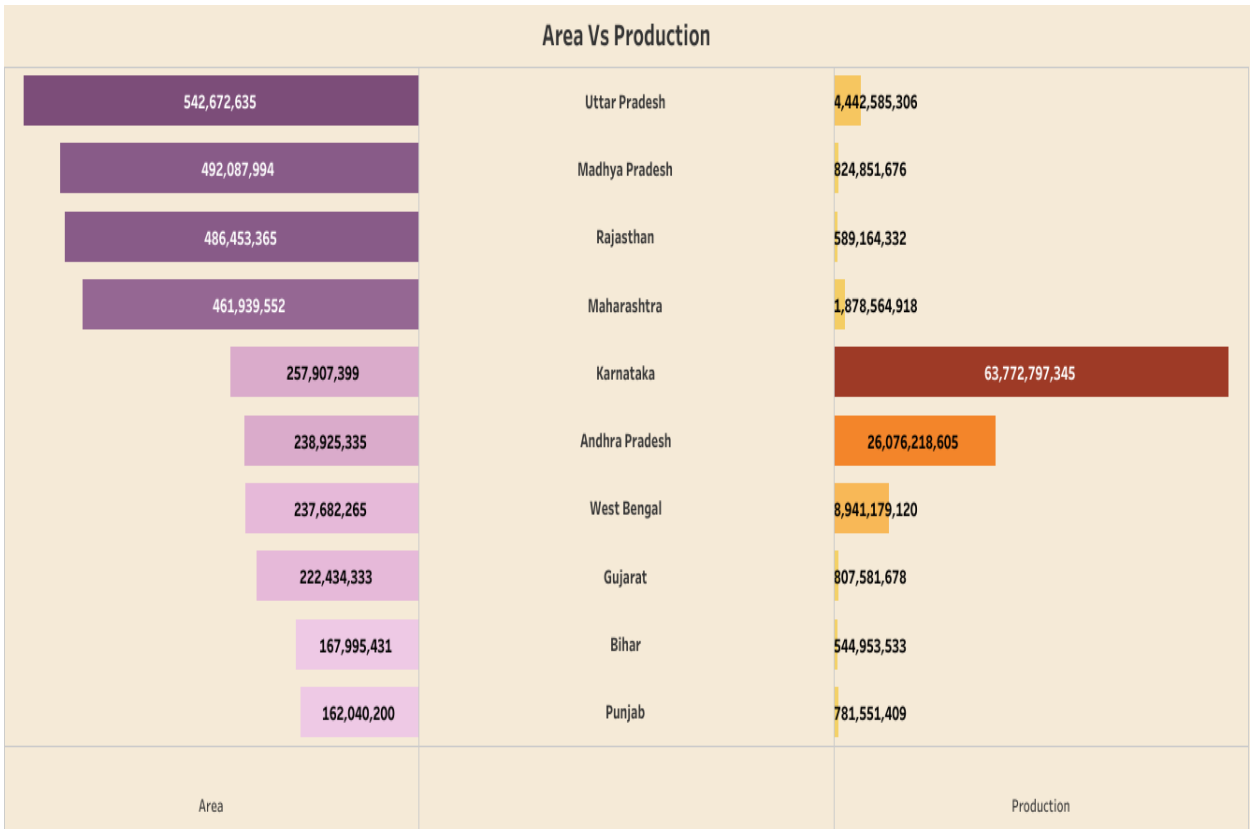



# 3. RESULTS :

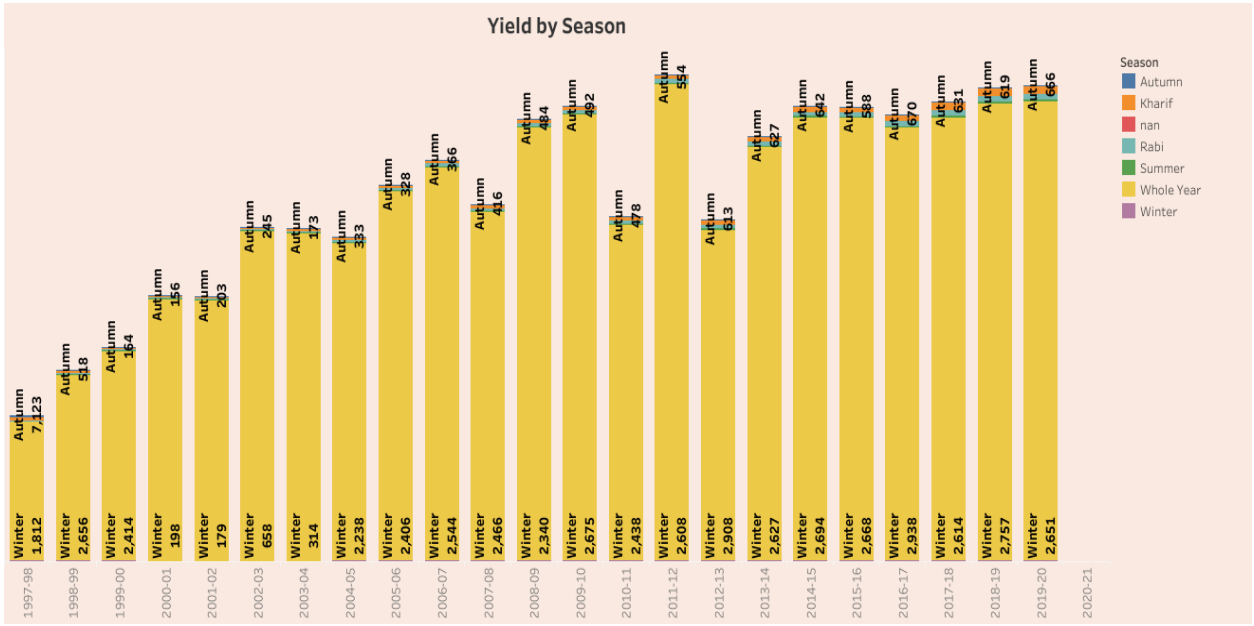
## 3.1 Statewise Agricultural Land



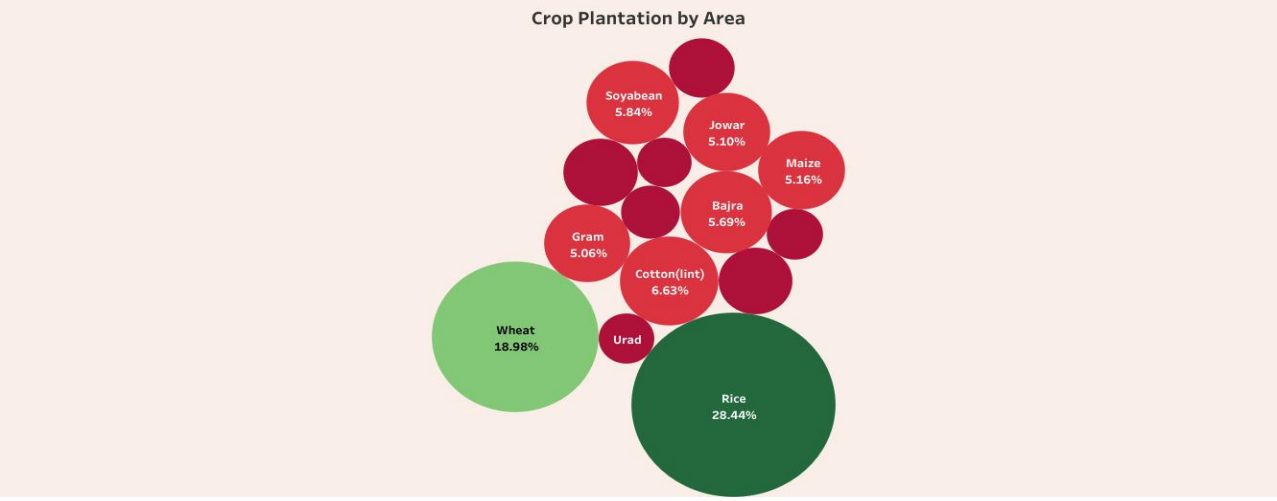

## 3.2 Area Vs Production



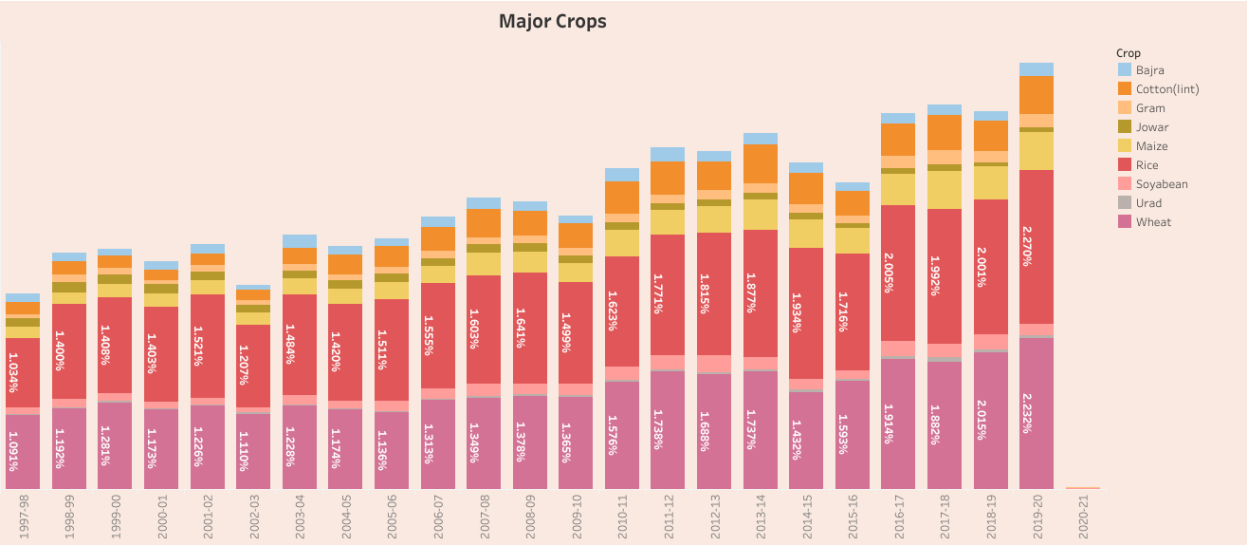

## 3.3 Yield by Season



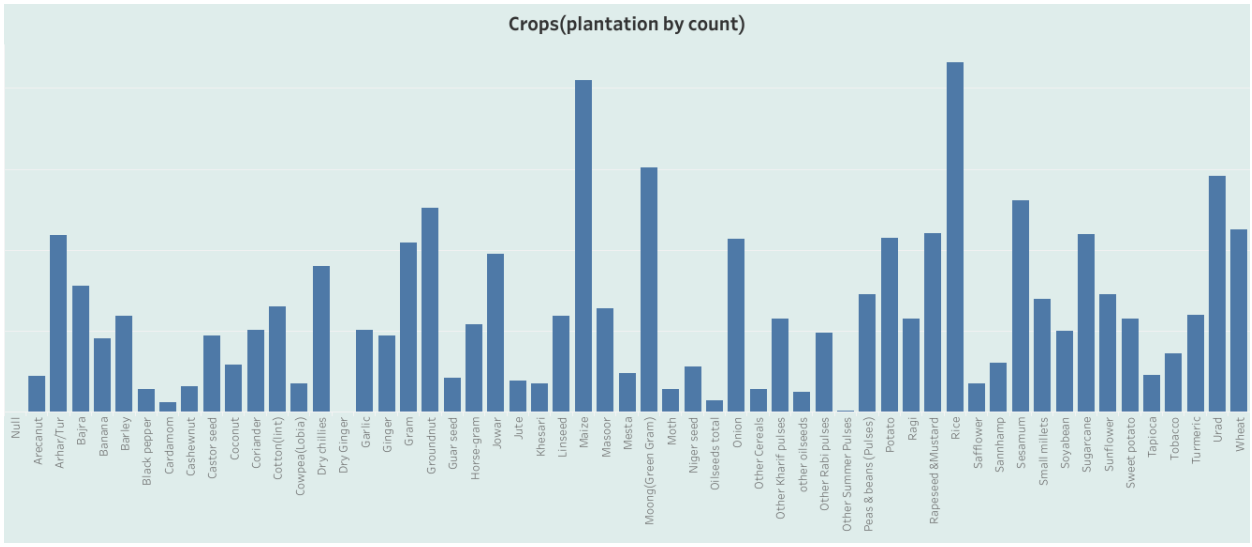
## 3.4 Crop Plantation by Area



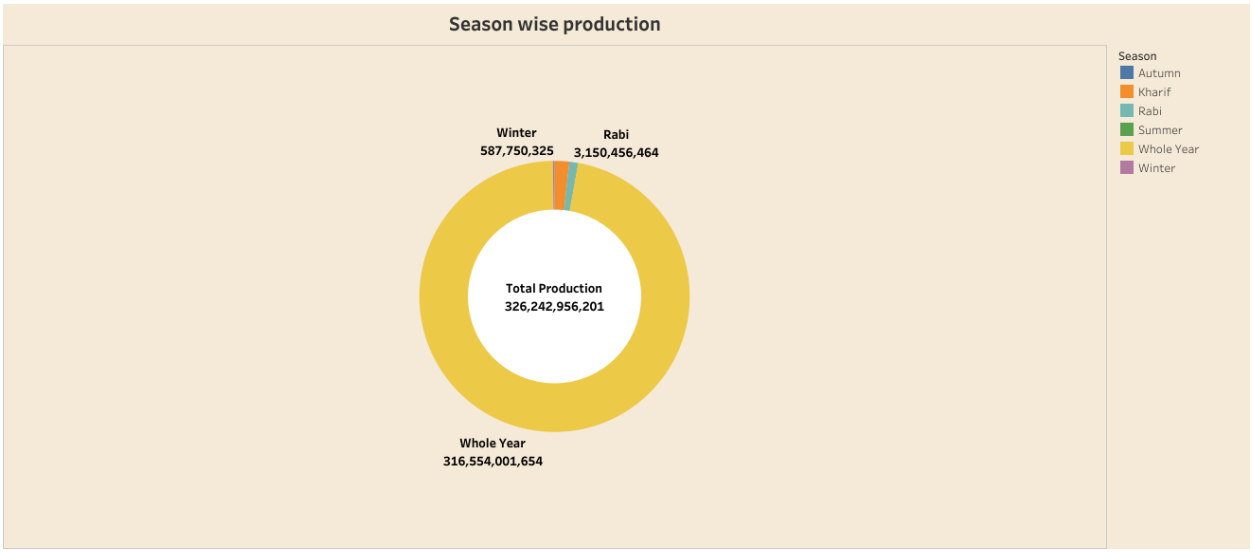

## 3.5 Major crops



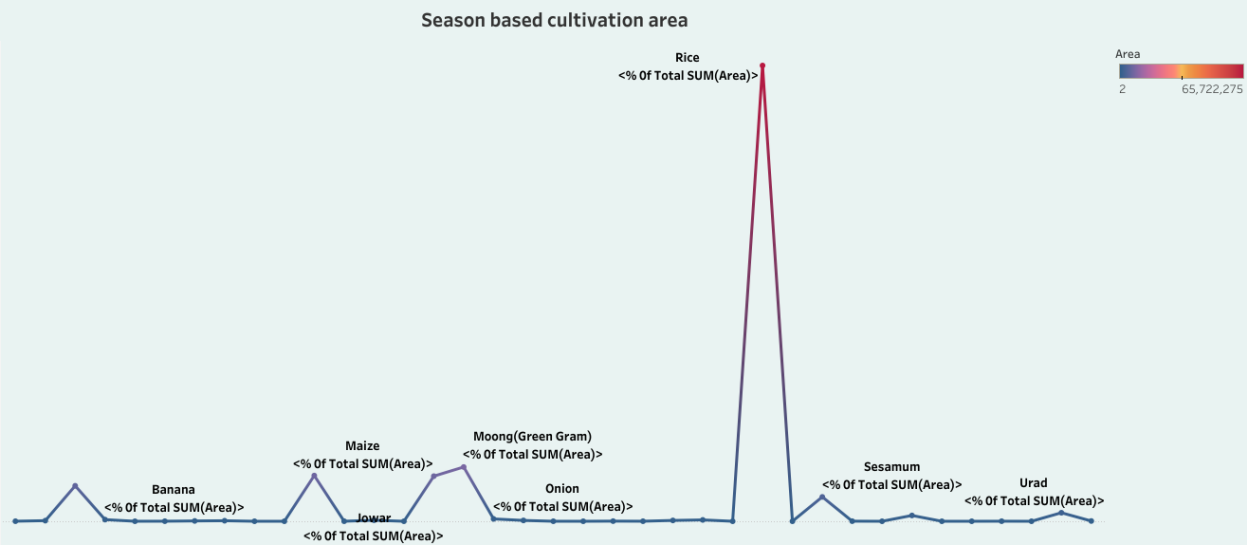
## 3.6 Crops (Plantation by count)



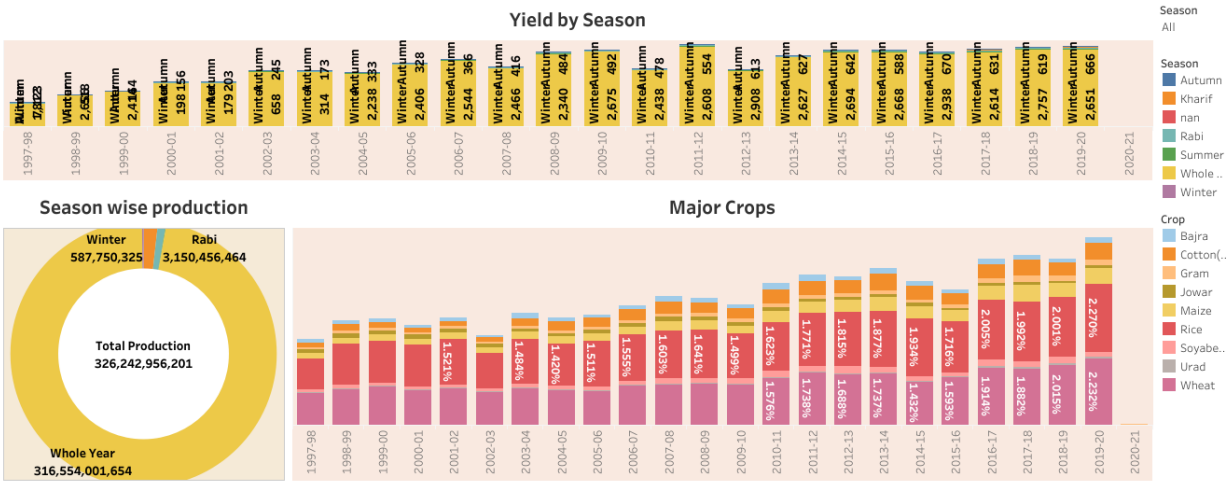

## 3.7 Season wise production



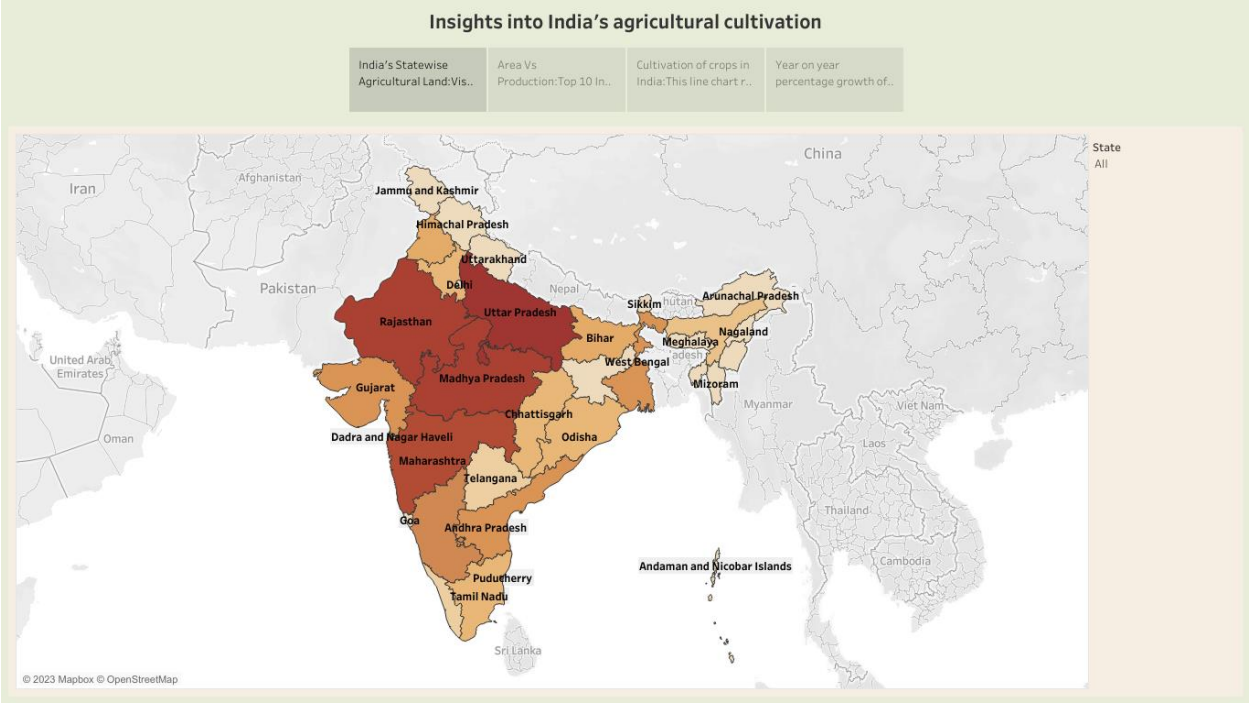
## 3.8 Season based cultivation area



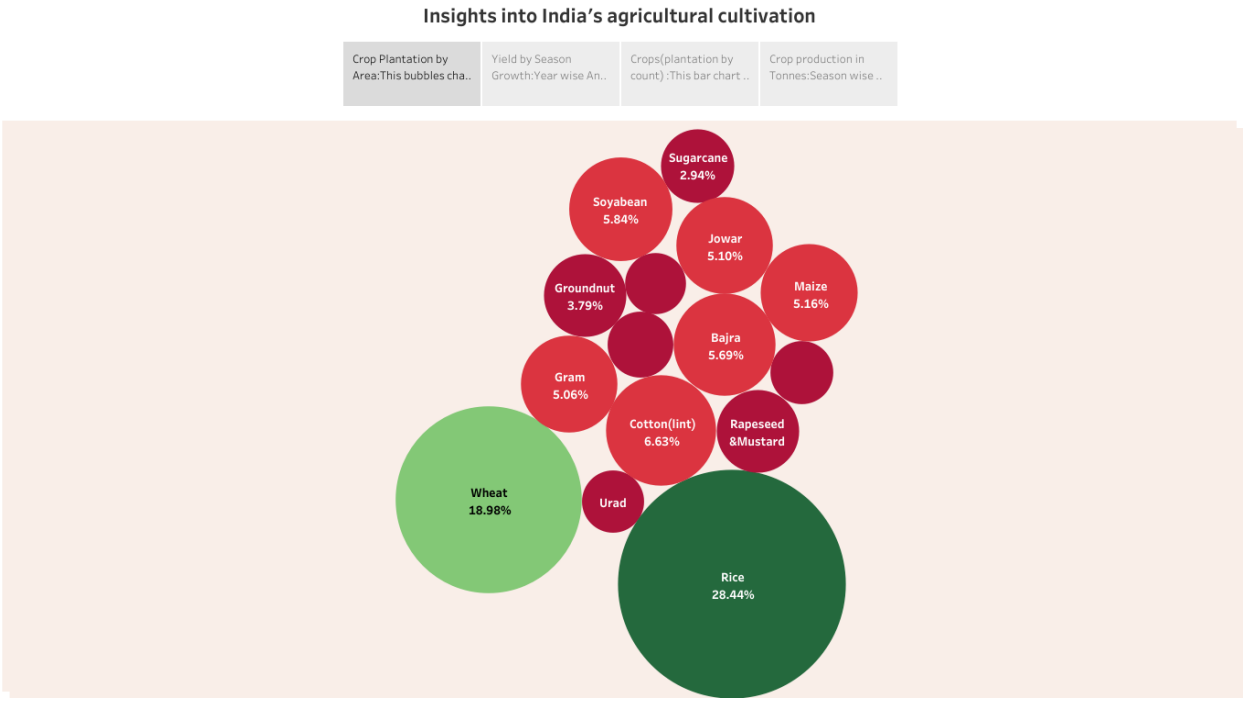

## Dashboard



# Story1




# Story2



## 4 . ADVANTAGES & DISADVANTAGES

### Advantages :

- Supporting livelihoods through food, habitat, and jobs; providing raw materials for food and other products;and building strong economies through trade.
- It provides employment opportunity to the rural agricultural as well as non-agricultural labourers.
- It also plays an important role in International business in Import and Export activities.
- Support Scientific Research : Researchers and Scientists normally rely on plants and animals that have been produced through agriculture.
- Sustainable farming , techniques , such as using natural fertilizers and crop rotations , can help to conserve natural resources and protect the environment.
- Nutritional security: Farming helps to endure that people have access to a diverse range of nutritious foods, which is essential for good health.
- Medicine: Some plants and herbs have medicinal properties and are used in traditional and modern medicine.
- Industrial uses : Agricultural products are used in a range of industries,such as textiles, cosmetics, and paper production.

### Disadvantages :

- Lack of water resources – Agriculture predominantly dependent on good monsoon.
- Erosin 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.
- Increased use of fertilizers has led to the loss of soil fertility.
- The use of ground water for tube well irrigation has led to water depletion.
- Modern farming methods have overused the natural resources base.
- Leads to deforestation.
- Burning of trees causes air pollution.

## 5.APPLICATIONS :

Agricultural Applications means applications relating to (i) cultivating, characterizing or modifying soil; (ii) producing, growing, improving, protecting, treating or modifying crops or forest products; (iii) raising, harvesting, improving, protecting, treating or modifying livestock, poultry, fish or shellfish; and (iv) the preparation, marketing or treatment of products resulting from the activities

described in (i)-(iii) above. Agricultural Applications shall include applications involving the improvement or modification of soil, crops, livestock, poultry, fish or shellfish and their resulting products as they relate to human health, as well as foods from plants and animals designed or modified to enhance their health attributes, in each case for nutraceutical applications but not therapeutic applications in humans. Agricultural Applications shall also include agricultural applications relating to bacteria, fungi, and viruses, as well as pest organisms with respect to, and only to the extent of, such bacteria, fungi, viruses or pest organisms' interaction with soil, plants, livestock, poultry, fish or shellfish. For avoidance of doubt it is acknowledged and understood that Agricultural Applications includes genes and gene-based or genetic technologies useful for achieving the above described activities, in particular: - Gene-based diagnostics of agricultural pests; - Gene-based analysis of metabolism of pesticides in plants and pest organisms; - Gene-based analysis of metabolism and physiological state of plants; livestock, poultry, fish, shellfish, or their pests; - Genetic modification of pest organism for functional analysis of pest-related properties; - Genetic modification of pest, bacteria, fungi, or viruses for functional analysis and optimization as protectants or growth stimulators of plants, livestock, poultry, fish or shellfish; - Functional genetic analysis of the genomes of plants, livestock, poultry, fish, or shellfish or their pest for applications in agriculture; - Genetic modification of plants, livestock, poultry, fish, or shellfish or their pests with the goal of enhancing properties relevant to production and end-use (i.e.; input and output traits); - Gene-based diagnostics for determining seed and crop composition and quality; and - Gene-based markers for facilitation of the breeding of plants, livestock, poultry, fish, or shellfish or their pests for applications in agriculture.

## 6 . FUTURE SCOPE:

- Yes, 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.
- Due to globalization, increase in household incomes and health consciousness the demand for fruits and vegetables, dairy products, fish and meat is going to increase in future. Research, technology improvements, protected cultivation of high-value greens and other vegetables will be more.
- The agricultural sector accounts for 15% of India's export earnings and 14-17% of GDP. The agricultural sector provides raw materials for a variety of industries, including textiles, sugar, flour mills, jute, and apparel.
- There is a bright future in the agriculture field. The global population is expected to reach nearly 10 billion by 2050, which means that there will be a significant increase in demand for food.

## 7 . 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.
- In the above presentation we can explains about the problems and solutions for our topic,and we defined by creating interactive Visualizations and Dashboard and story board to bring clean and deep understanding of the data and give solutions to make Agriculture Crop Production more efficiently.