

**GOVERNMENT ARTS COLLEGE, PARAMAKUDI**  
**UG DEPARTMENT OF MATHEMATICS**

**PROJECT TITLE:**

**India agriculture crop production analysis**

**SUBMITTED BY:**

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**DEPARTMENT OF MATHEMATICS**

**GOVERNMENT ARTS COLLEGE, PARAMAKUDI.**

# **PROJECT REPORT**

## **I ) INTRODUCTION**

### **OVERVIEW**

According to the World Bank, India is a global agricultural powerhouse. It is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes), as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. While agriculture's share in India's economy has progressively declined to less than 15% due to the high growth rates of the industrial and services sectors, the sector's importance in India's economic and social fabric goes well beyond this indicator.

### **PURPOSE**

- **Food Security.** The primary purpose of crop production in India is to ensure an adequate and stable supply of food for its growing population. Crops like rice, wheat, pulses, and vegetables are essential for meeting the dietary needs of the country.
  - **Livelihoods.** Agriculture is a major source of livelihood for a significant portion of India's population. Crop production provides employment opportunities for millions of farmers and laborers, contributing to rural income and economic stability.
  - **Economic Growth.** Crop production is a significant contributor to India's economy. It provides raw materials for various industries, supports the agri-processing sector, and generates income through exports.
-

them say?  
: them saying?

What are their wants, needs, hopes, and dre  
What other thoughts might influence their beha

**Major Crop Losses** is a  
diverse country with  
varying agro-climatic  
conditions, leading to the  
cultivation of a wide range  
of crops. Some of the  
major crops include rice,  
wheat, sugarcane, cotton,  
oilseeds, and fruits.

**Land Fragmentation:**  
Subdivision of land  
holdings has led to smaller, less  
productive plots.

**Lack of Irrigation  
Infrastructure:**  
Dependence on  
monsoon rains affects  
crop productivity,  
highlighting the need  
for improved irrigation  
facilities.

**Pests and Diseases:**  
Crop losses due to  
pests and diseases  
remain a challenge,  
requiring sustainable  
pest management  
strategies.

**Green Revolution:**  
Initiated in the late  
1960s, this movement  
introduced high-yielding  
crop varieties, modern  
agricultural technologies,  
and improved irrigation  
to increase food  
production.



**Persona's name**  
Short summary of  
the persona

**Genetically Modified  
Crops (GM):** Widely  
discussed, but currently  
restricted crops that  
have shown potential for  
improved yields and  
resistance to  
pests/diseases.

**Minimum Support Price  
(MSP):** The MSP ensures  
farmers receive a  
guaranteed price for  
their crops, protecting  
their income.

**Smart  
Farming  
Tech:** This crop  
size utilizes  
precision farming  
tech features,  
crop features.

**Precision  
Agriculture:** Modern  
techniques like  
satellite imagery and  
IoT devices are being  
used for efficient  
resource allocation.

**Policy Impact:** This is a  
general overview, and  
detailed analysis is being  
conducted. The report  
will provide information  
on the impact of various  
policies on the Ministry of  
Agriculture & Farmers  
Welfare, Government of  
India, and its impact on  
agriculture & farmers.

we observed?  
e them doing?

What are their fears, frustrations, and anxie  
What other feelings might influence their beha

## your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

minutes

2

## Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

### TIP

You can select a sticky note and hit the pencil icon to start drawing!

3

## Group Ideas

Take turns sharing your ideas while others listen. If sticky notes have been grouped, give them a name. If you have more than six sticky notes, try and group them.

⌚ 20 minutes

### Person 1



### Person 2



### Person 3



### Person 4



### Person 5



### Person 6



### Person 7



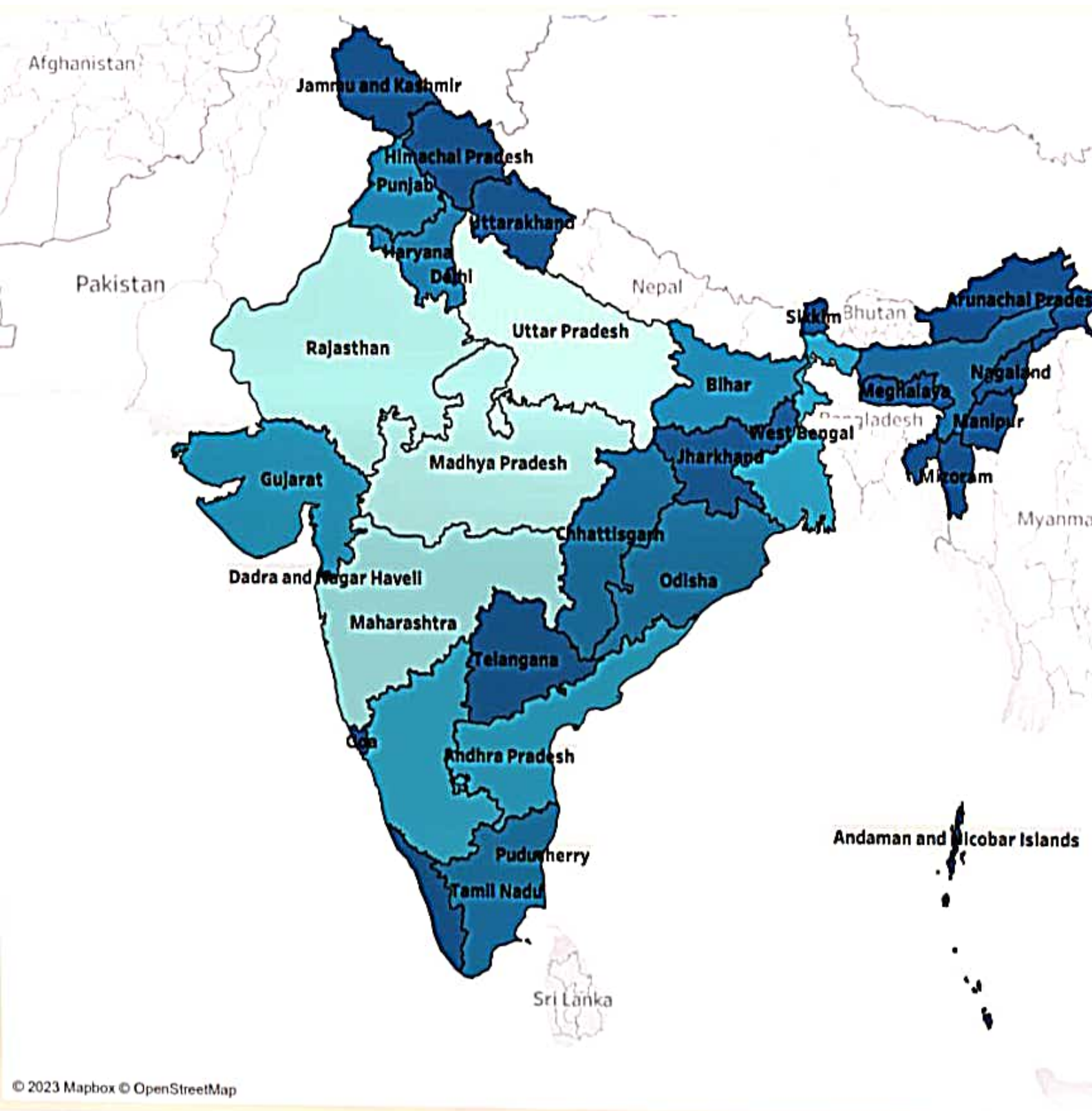
### Person 8



### Key rules of brainstorming

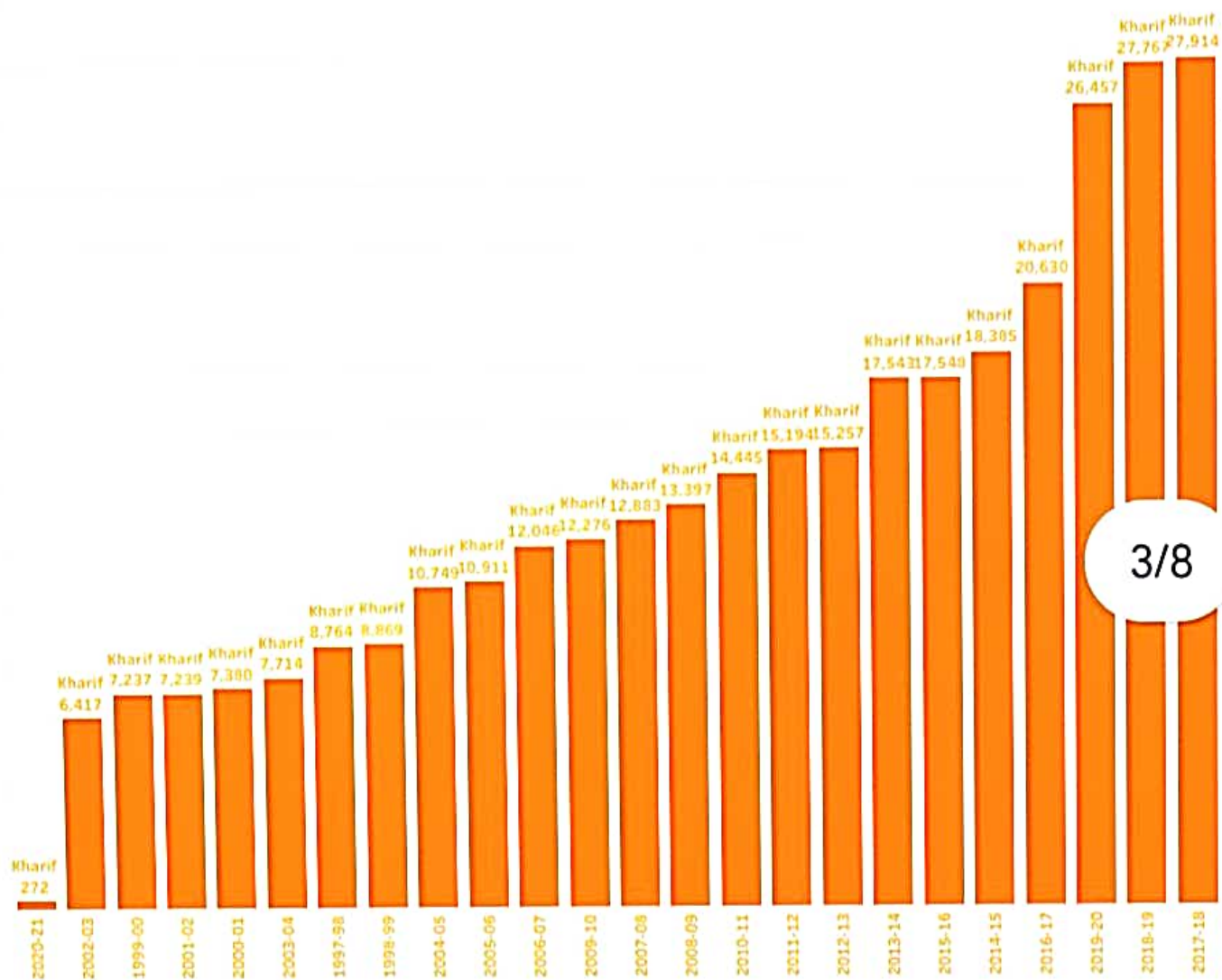
To run a smooth and productive session

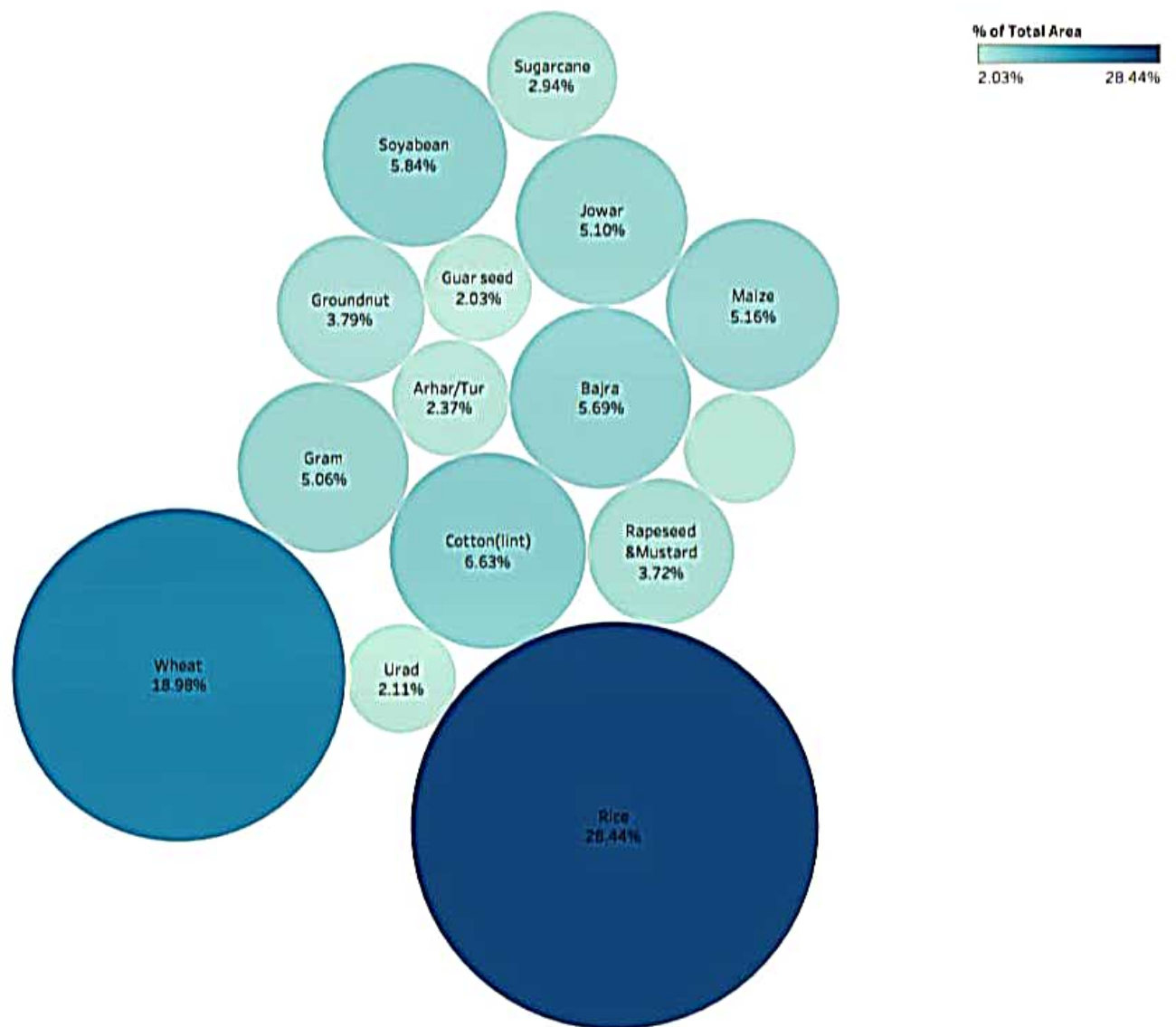
- Stay in topic.
- Encourage wild ideas.



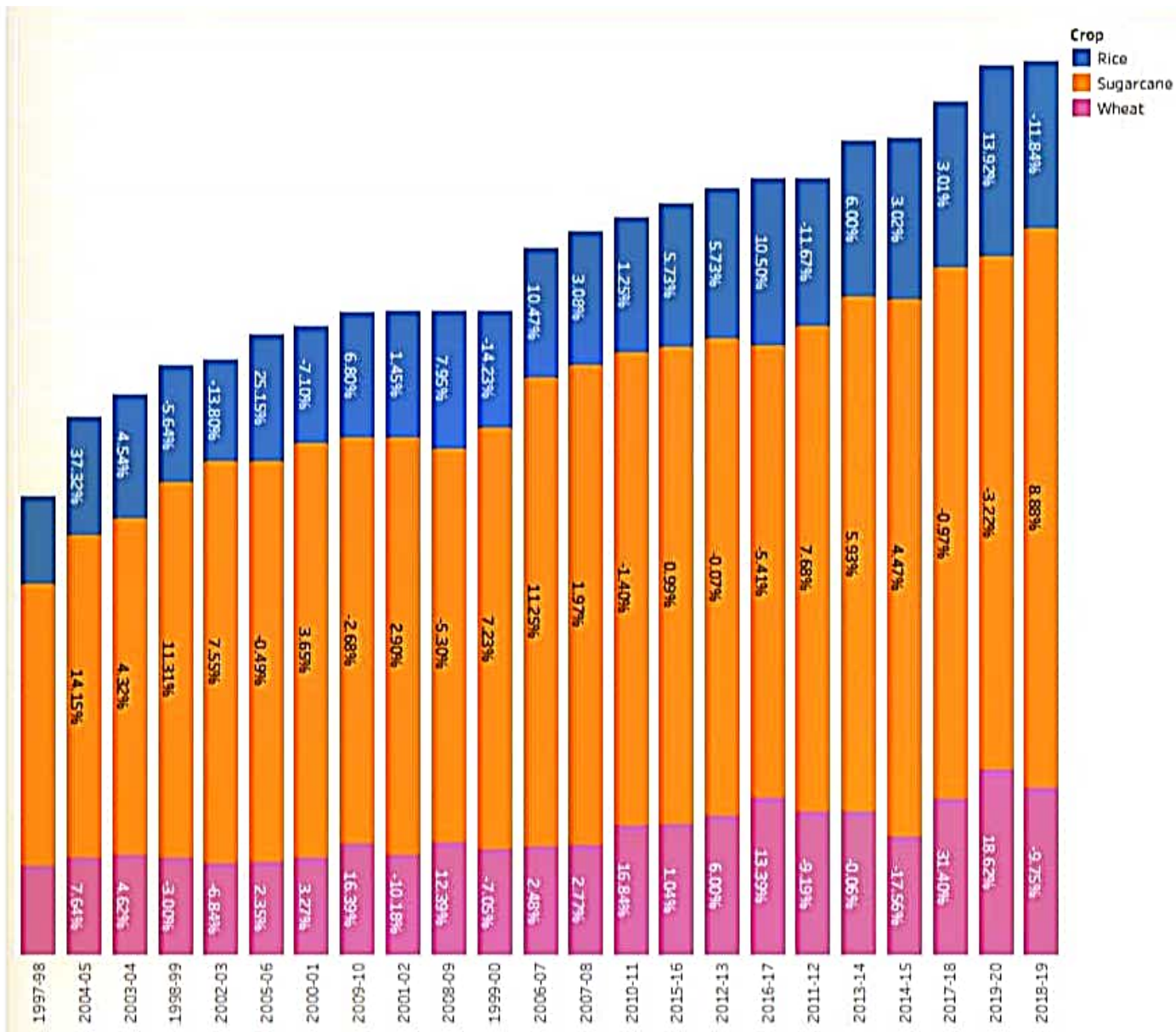


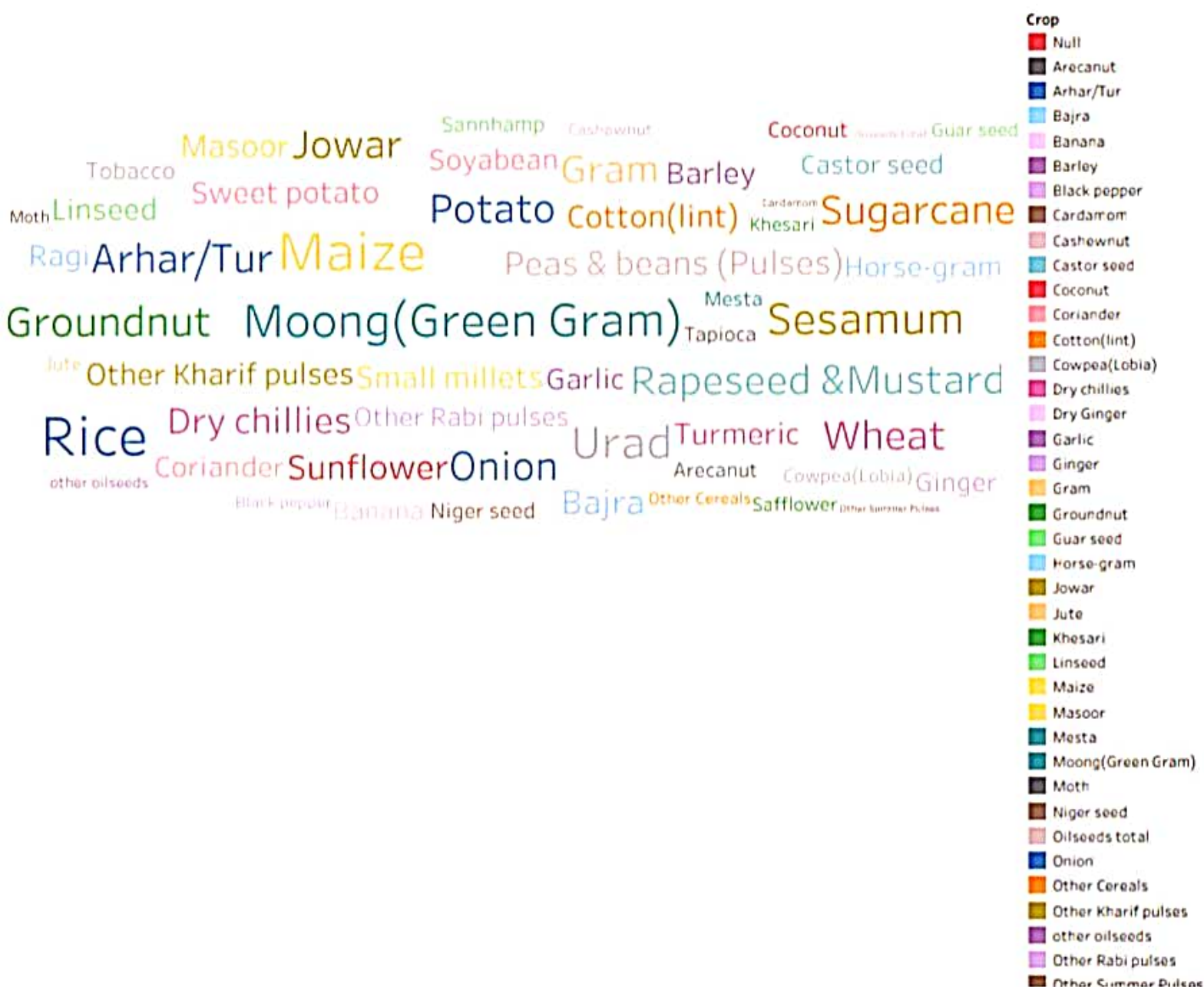


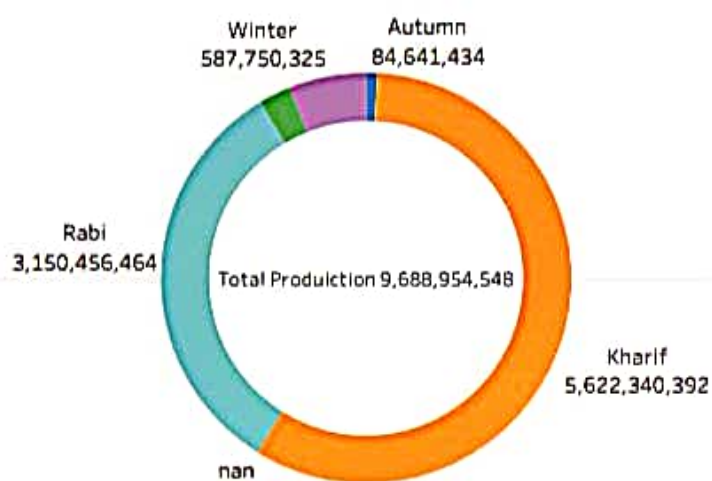
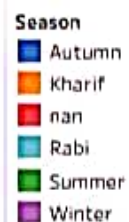


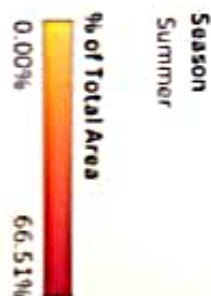
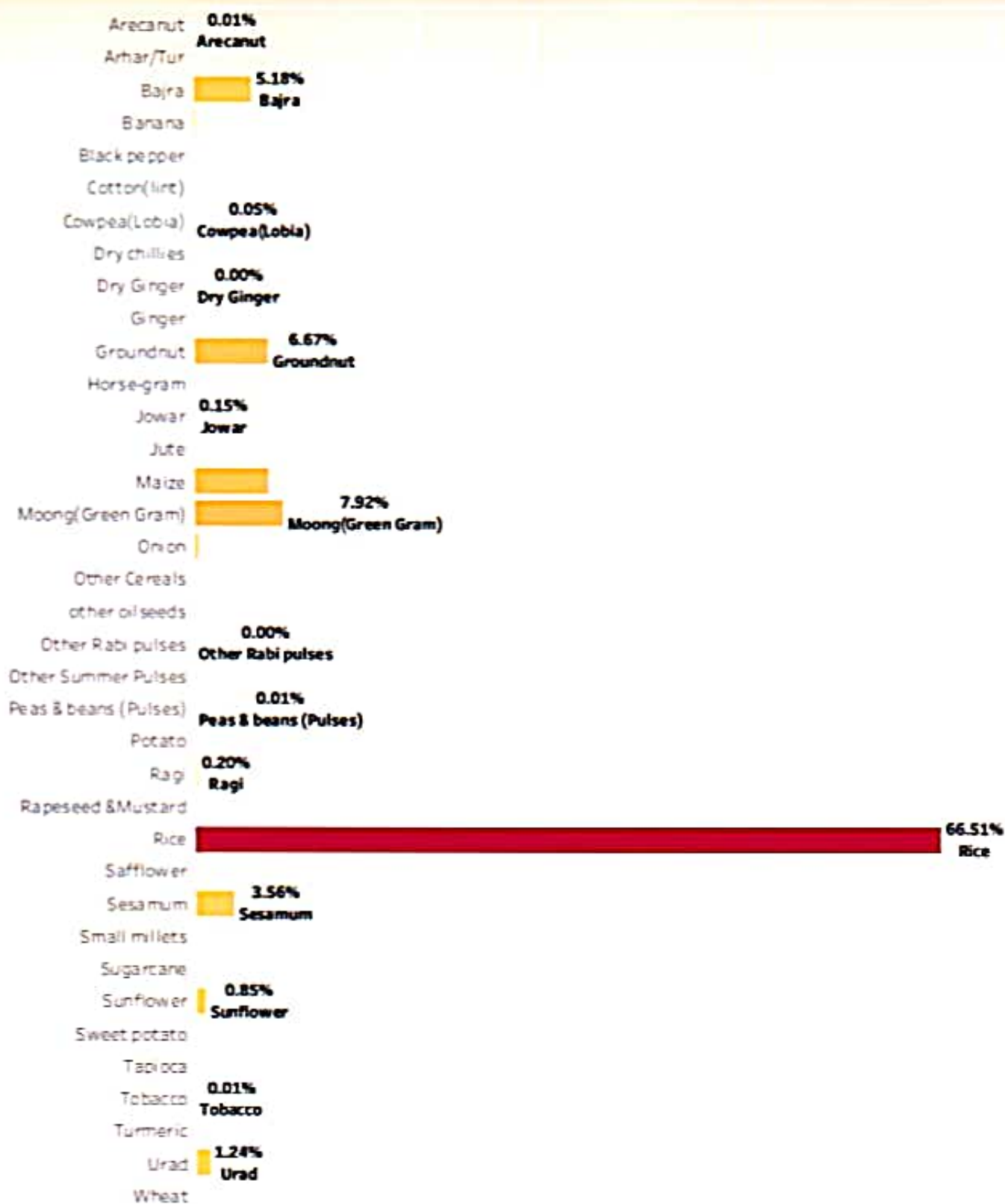




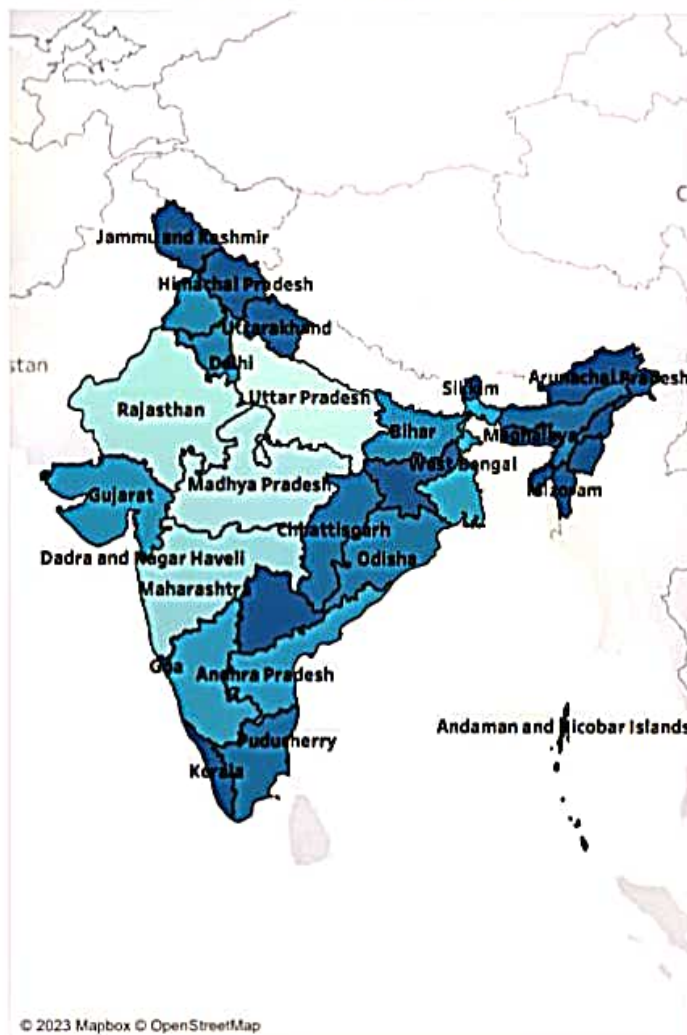








Statewise Agriculture Land

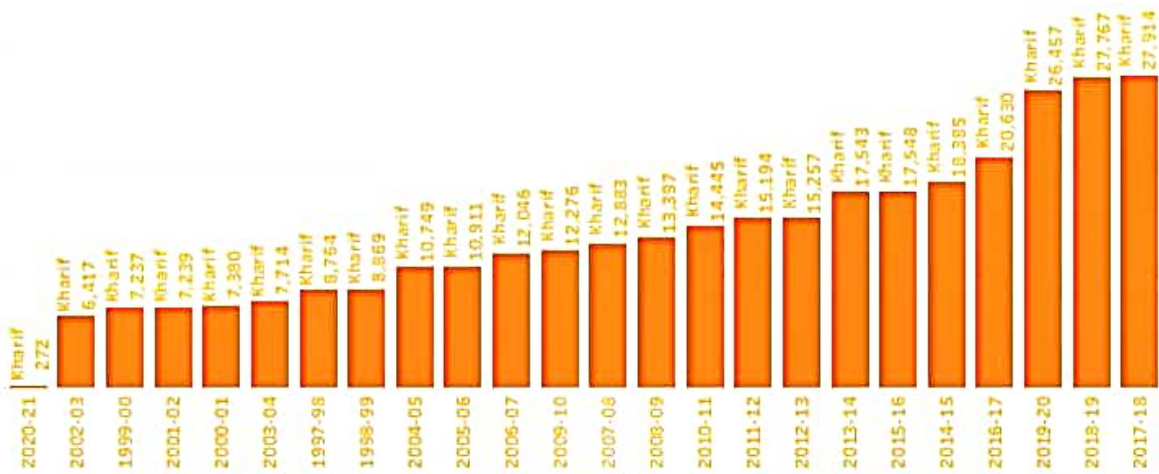


Area Vs Production

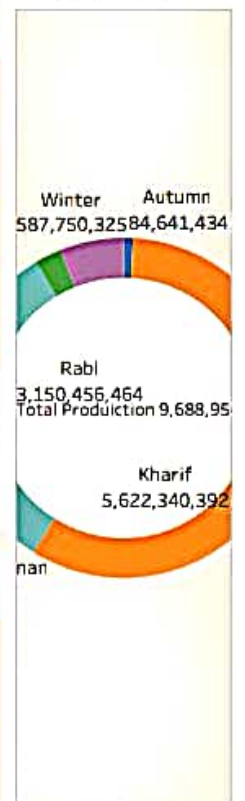




### Yield Vs Season



### Season Wise Production



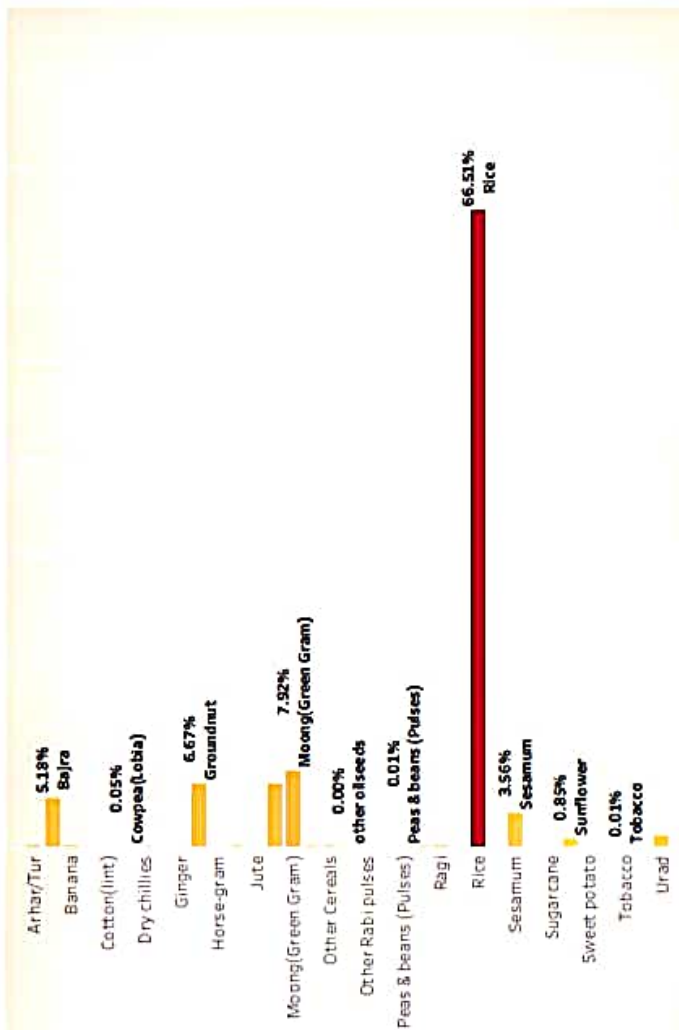
### Major Crops



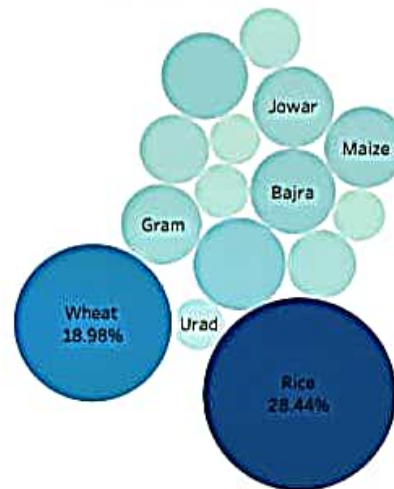
Season  
Autumn  
Kharif  
nan  
Rabi  
Summer  
Winter



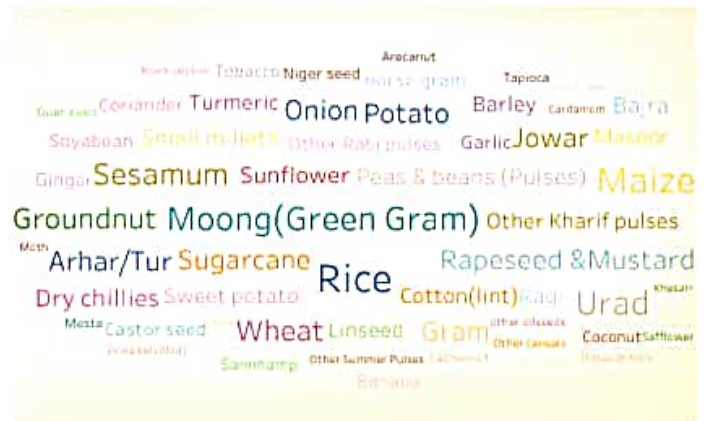
### Season Based Cultivation Area



### Crop Plantation by Area



### Crops(Plantation by count)



STORY1

State Wise  
Agricultural

Area Vs Production

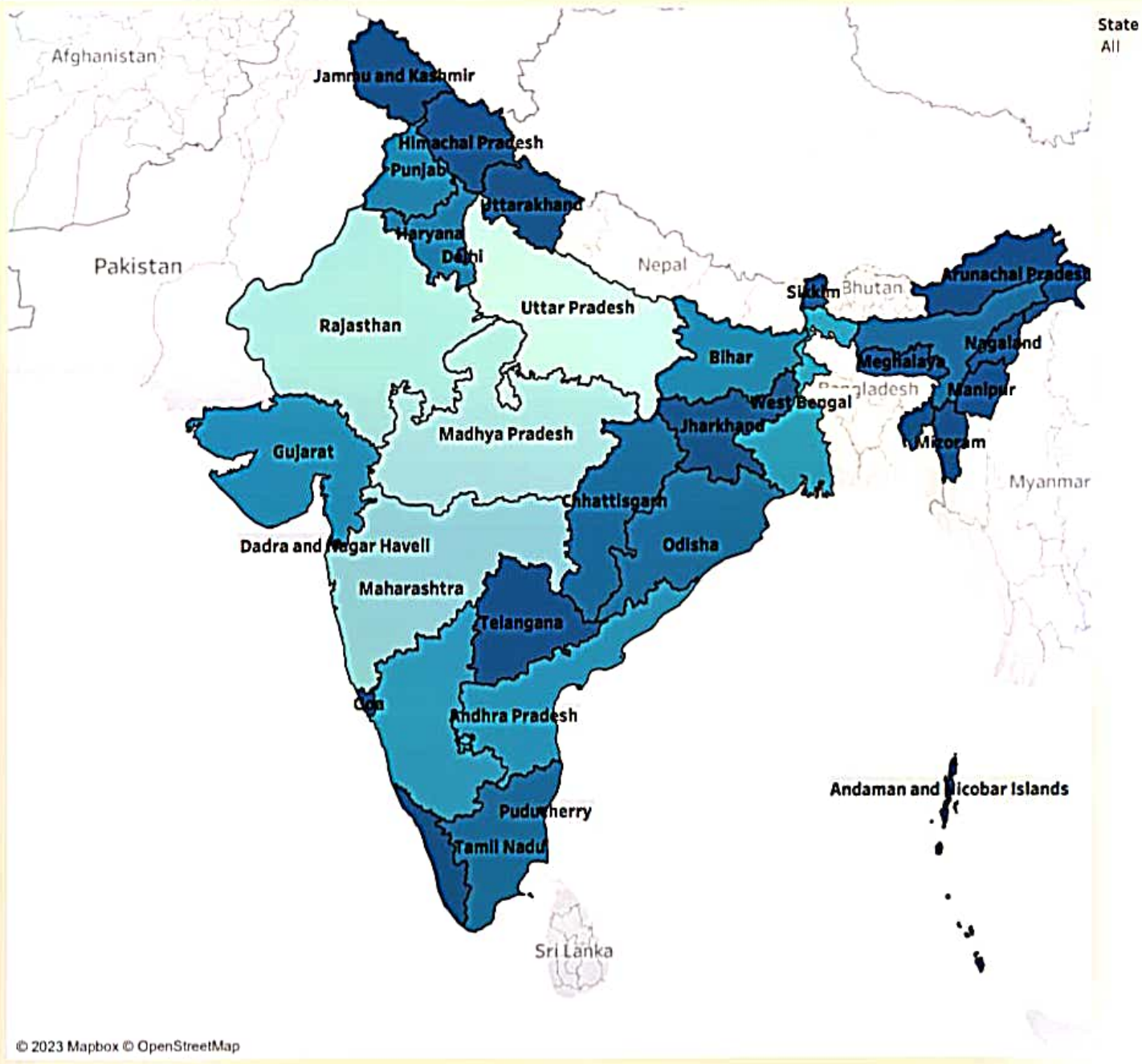
Yield Vs Production

Crop Plantation By  
area

Major Crops

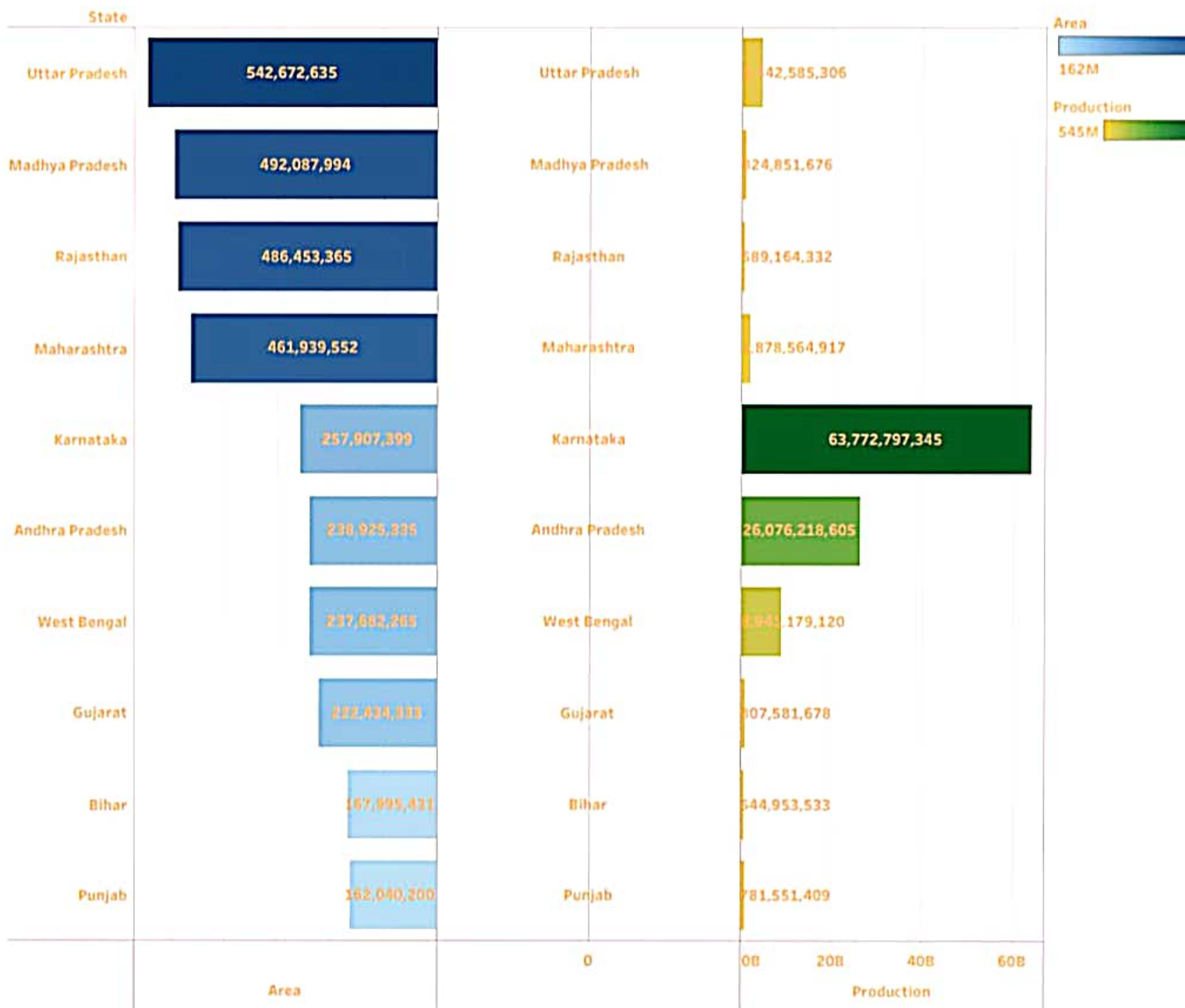
Crops

Se  
Pro



STORY1

State Wise Agricultural	Area Vs Production	Yield Vs Production	Crop Plantation By area	Major Crops	Crops	Seasonal Production
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STORY1

State Wise  
Agricultural

Area Vs Production

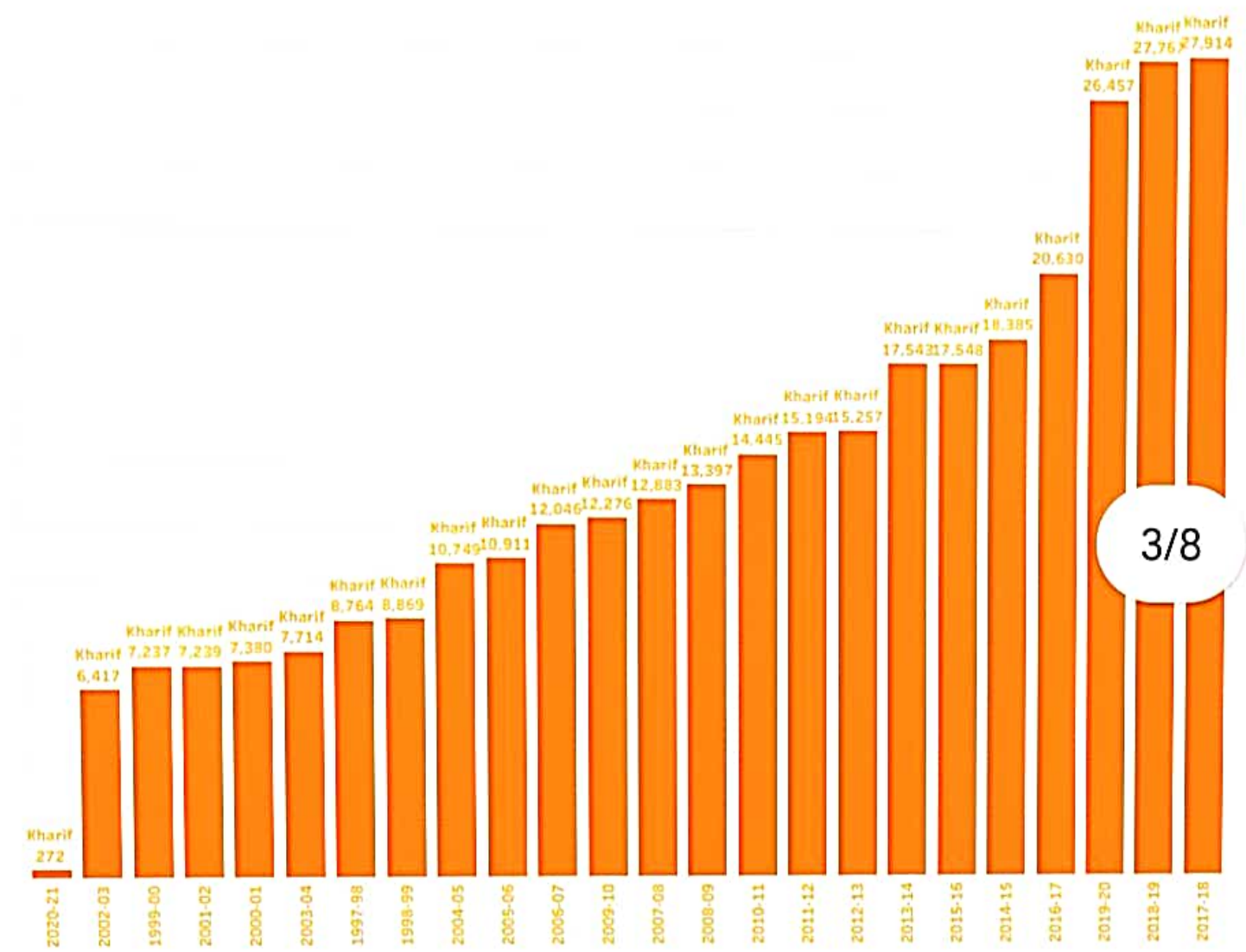
Yield Vs Production

Crop Plantation By  
area

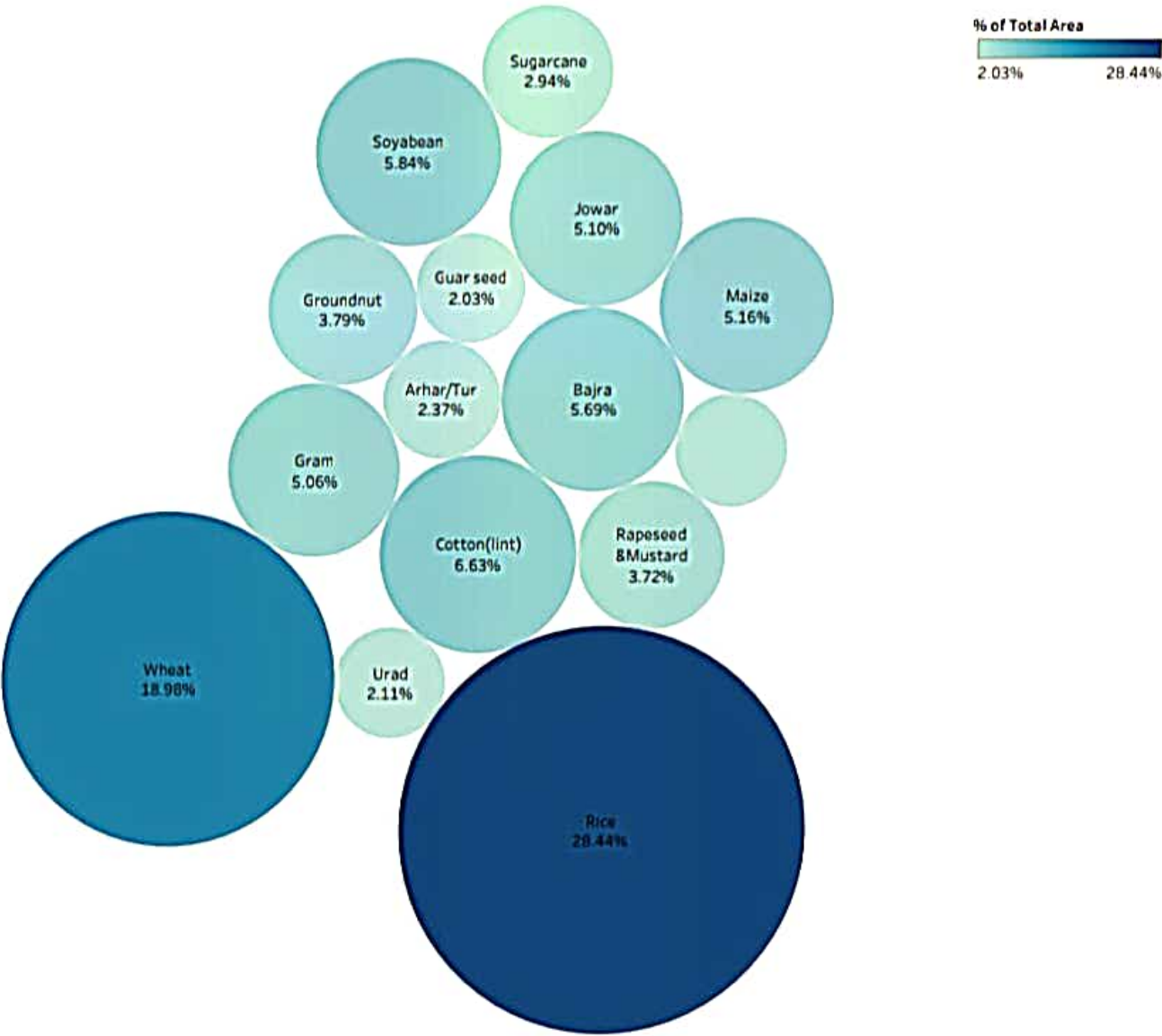
Major Crops

Crops

Season Wise  
Production



STORY1





STORY1

Area Vs  
Production

Yield Vs Production

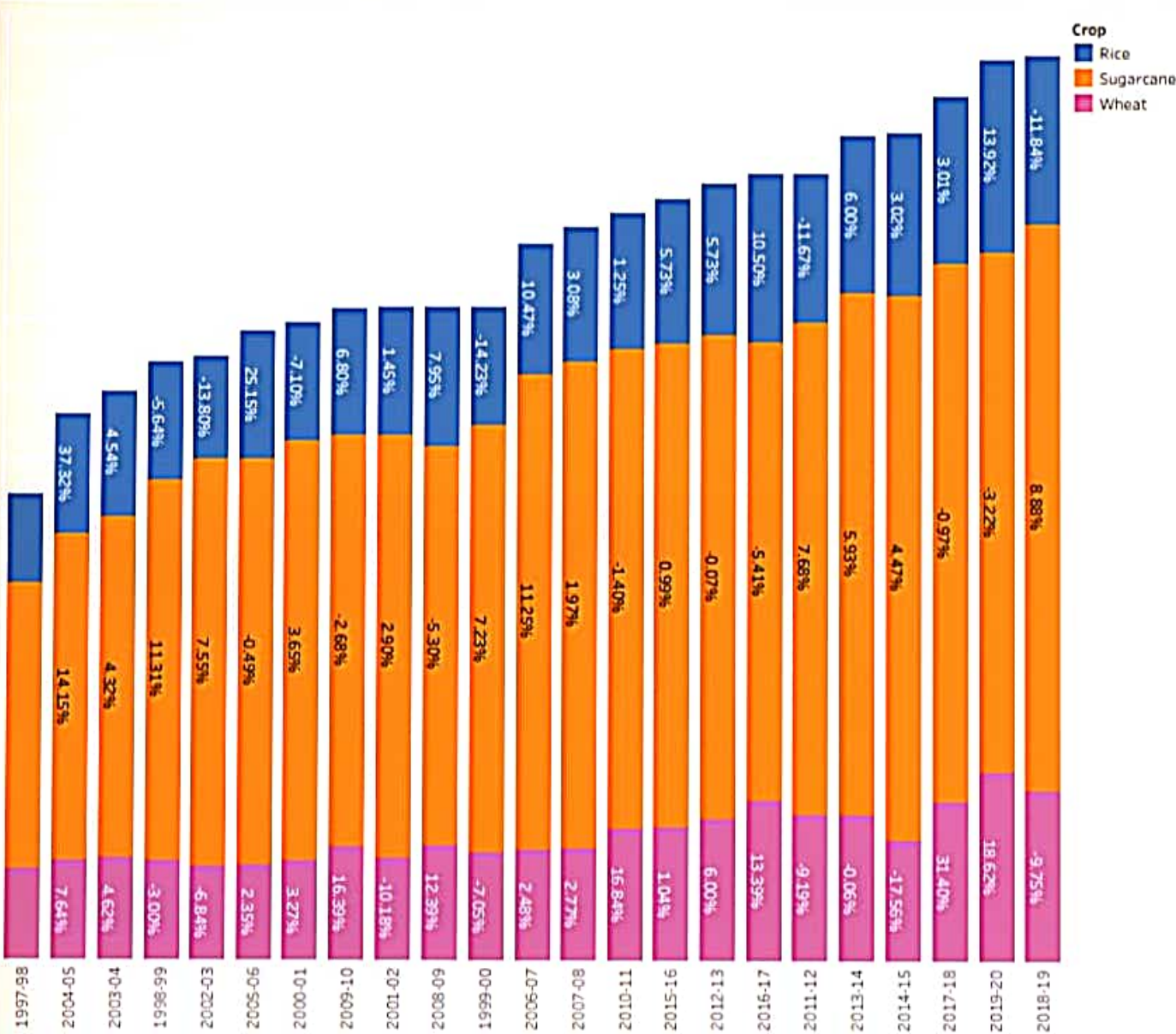
Crop Plantation By  
area

Major Crops

Crops

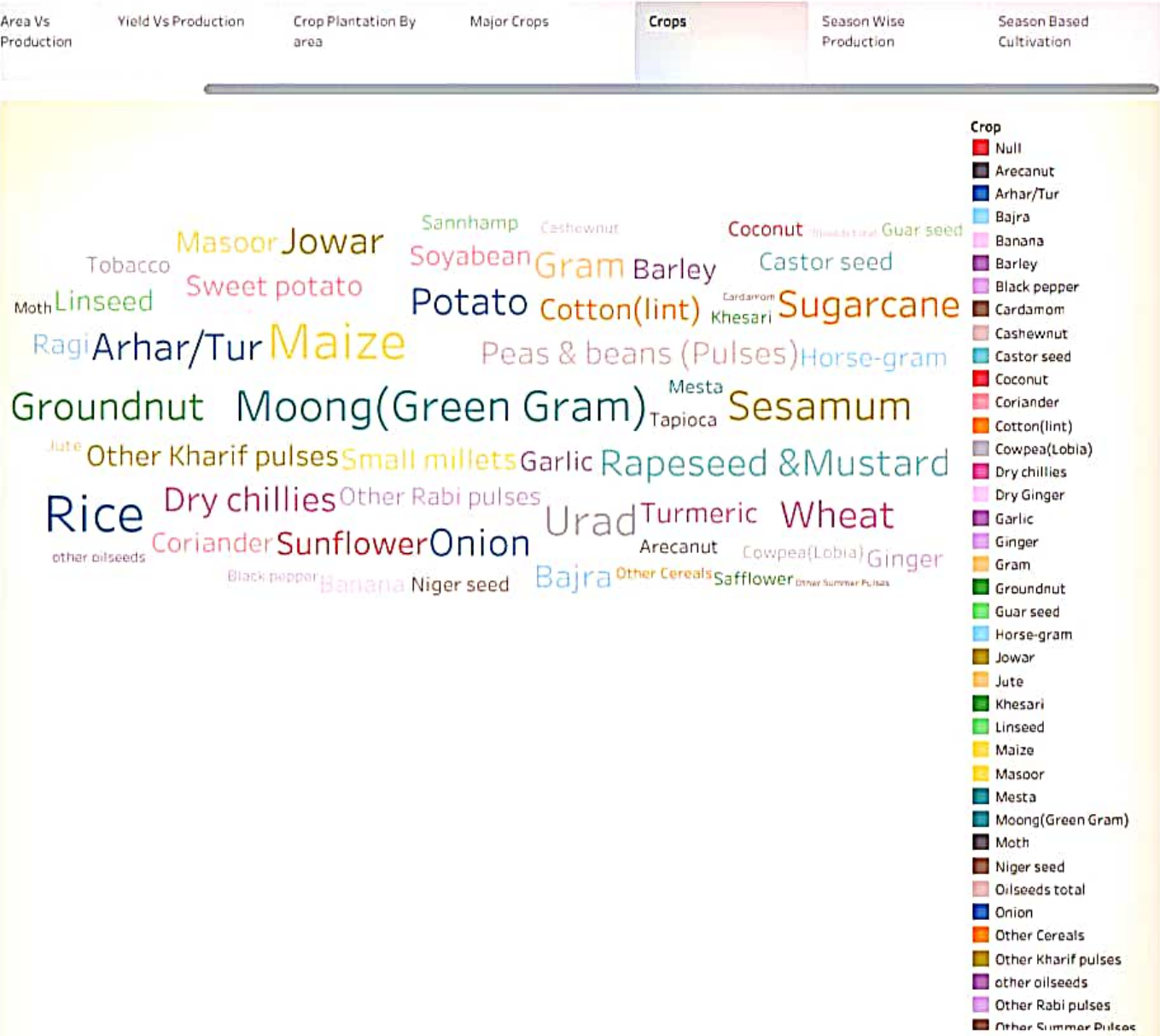
Season Wise  
Production

Season Based  
Cultivation





STORY1



# STORY1

Area Vs  
Production

Yield Vs Production

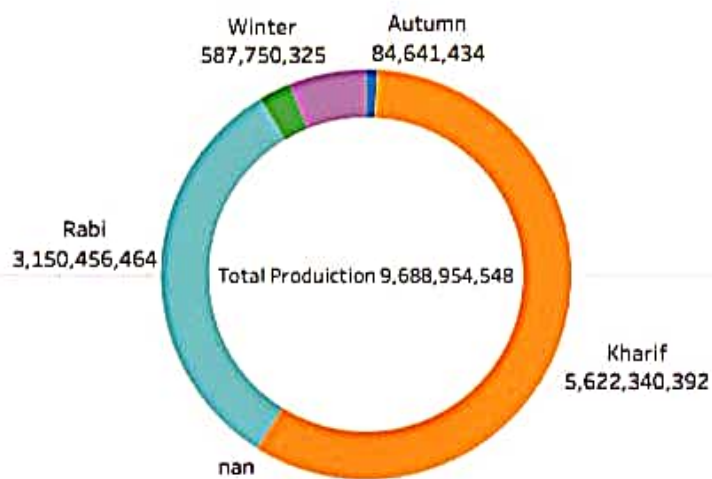
Crop Plantation By  
area

Major Crops

Crops

Season Wise  
Production

Season Based  
Cultivation



## Season

- Autumn
- Kharif
- nan
- Rabi
- Summer
- Winter

STORY1

Area Vs Production

Yield Vs Production

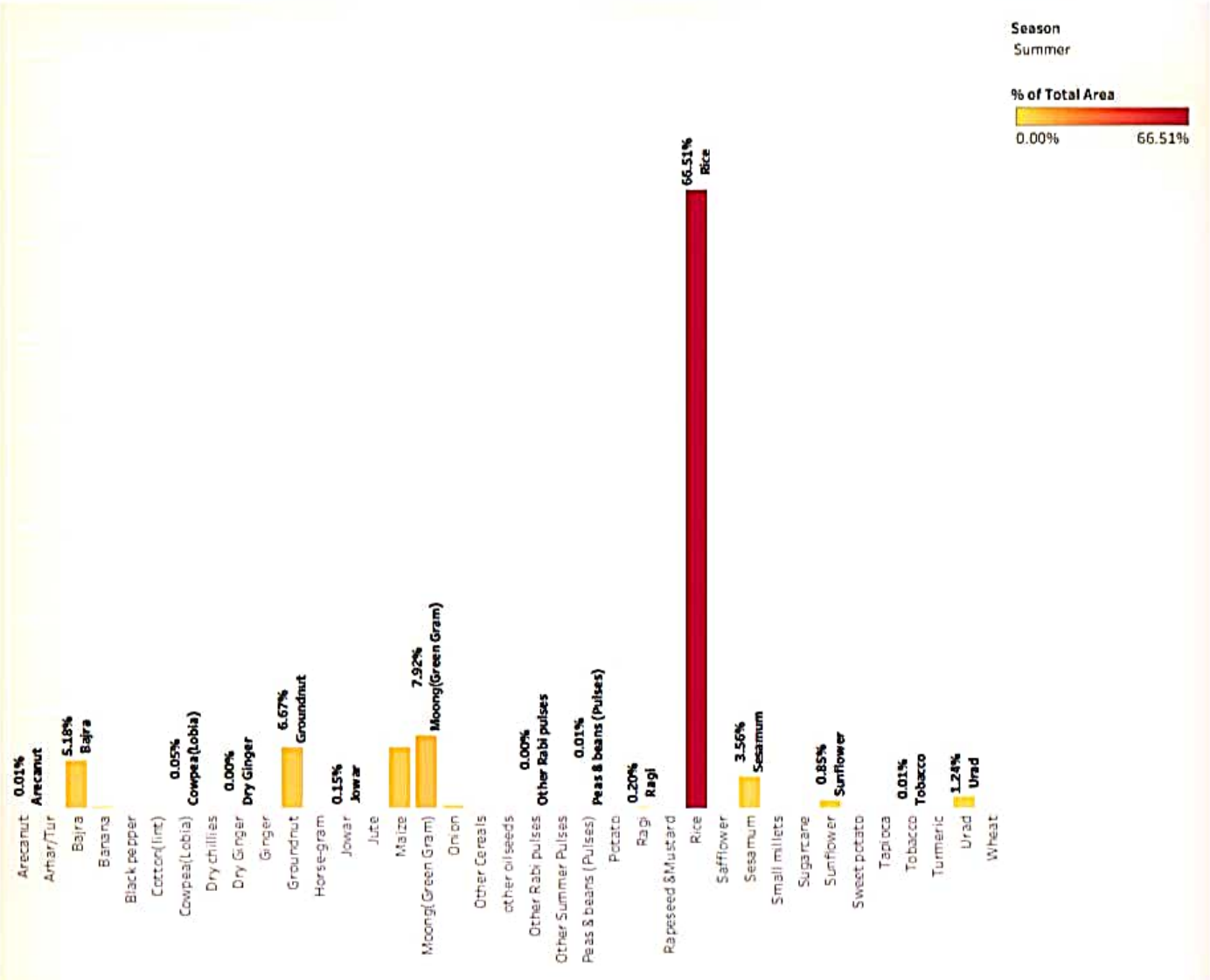
Crop Plantation By area

Major Crops

Crops

Season Wise Production

Season Based Cultivation



- **Export Opportunities.** Exploring international markets for Indian agricultural products.
- **Reducing Post-Harvest Losses.** Implementing better storage and transportation facilities to reduce wastage.
- **Organic Farming.** The growing demand for organic produce presents opportunities for Indian farmers.
- **Farmer Welfare.** Addressing issues of farmer distress and income security.

To realize these prospects, India must navigate challenges like land fragmentation, water Scarcity, and the need for significant investments in infrastructure and research and development.