



# WELCOME TO SMARTINTERNZ





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

### *III B SC MATHEMATICS*

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UNDER THE GUIDENCE OF

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# CONTENT OF THE THESIS

- ❖ INTRODUCTION
- ❖ PROBLEM DEFINITION & DESIGN THINKING
- ❖ RESULT
- ❖ ADVANTAGES & DISADVANTAGES
- ❖ APPLICATIONS
- ❖ CONCLUSION
- ❖ FUTURE SCOPE
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# ❖ INTRODUCTION

## 1.1 OVERVIEW

India's agricultural crop production analysis from 1997 to 2021 reveals a multifaceted picture of the country's farming landscape. During this period, India witnessed substantial changes in crop yields, cropping patterns, and agricultural practices. Various factors, including government policies, climate fluctuations, technological advancements, and market dynamics, have played significant roles in shaping the nation's agricultural output.

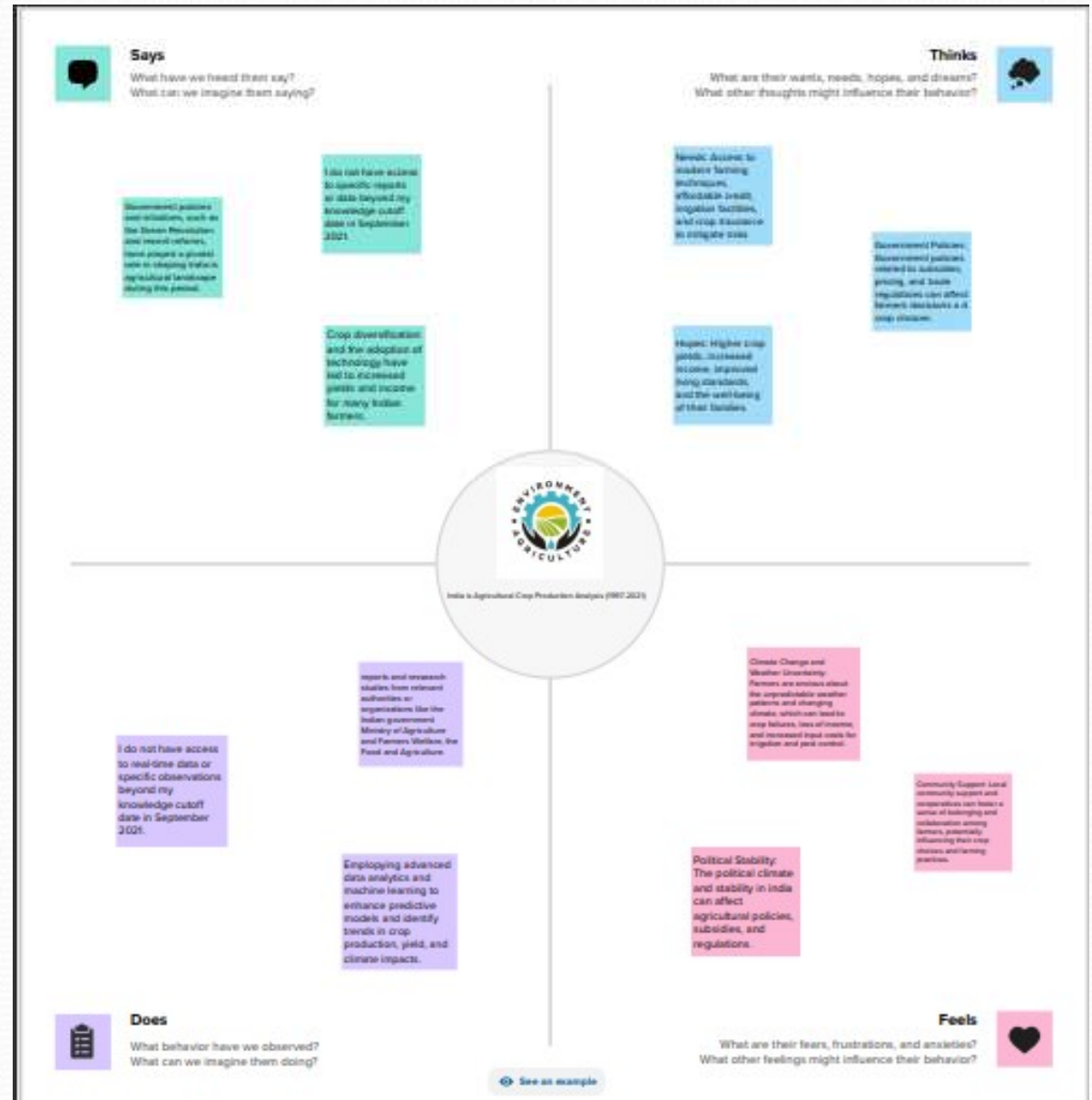


## 1.2 PURPOSE

❖ The purpose of analyzing India's agricultural crop production is to assess productivity, formulate effective policies, ensure food security, evaluate economic impact, promote sustainability, address climate resilience, manage global trade, track technology adoption, encourage crop diversification, and consider social and environmental impacts to guide informed decisions for a robust and sustainable agricultural sector.

# ❖ PROBLEM DEFINITION & DESIGN THINKING

## 2.1 EMPATHY MAP



## 2.2 IDEATION & BRAINSTORMING MAP

**Before you collaborate**

Take time to prepare your group. This session is a key part of your team's work. It's important to have a clear understanding of the problem you're trying to solve. This will help you to generate ideas that are relevant and useful.

**Define your problem statement**

What problem are you trying to solve? Frame your problem as a clear, specific statement. This will help you to focus your brainstorming efforts on finding solutions to a specific problem.

**Group ideas**

Take time to share your ideas. Encourage everyone to contribute. This will help you to generate a wide range of ideas. It's important to listen to each other and build on each other's ideas.

**Prioritize**

Now that you have a list of ideas, it's time to prioritize them. Use the 2x2 matrix to evaluate each idea based on its importance and feasibility. This will help you to identify the most promising ideas for further exploration.

**After you collaborate**

Now that you have a list of prioritized ideas, it's time to develop a plan of action. This will help you to implement the most promising ideas and achieve your goals.

**Key rules of brainstorming**

- Go for quantity
- Don't criticize
- Encourage wild ideas
- Build on the ideas of others
- One idea at a time
- Stay on topic
- Focus on the problem

**2x2 Matrix for Prioritization**

Importance	Feasibility	
High	High	Investigate the impact of climate change on crop yields for major crops like rice, wheat, and corn. Identify future trends and develop strategies to address them.
High	Low	Investigate the impact of climate change on crop yields for major crops like rice, wheat, and corn. Identify future trends and develop strategies to address them.
Low	High	Investigate the impact of climate change on crop yields for major crops like rice, wheat, and corn. Identify future trends and develop strategies to address them.
Low	Low	Investigate the impact of climate change on crop yields for major crops like rice, wheat, and corn. Identify future trends and develop strategies to address them.





## ❖ ADVANTAGES & DISADVANTAGES

### ADVANTAGES TO INDIA'S AGRICULTURE

- Food security
- Employment
- Economic contribution
- Rural livelihoods
- Crop diversity

### DISADVANTAGES TO INDIA'S AGRICULTURE

- Climate risks
- Land degradation
- Water scarcity
- Price volatility
- Small landholdings



### Area in acres region-wise

[NEXT](#)

West

4,030,580,636

South

4,030,580,636

North-East

4,030,580,636

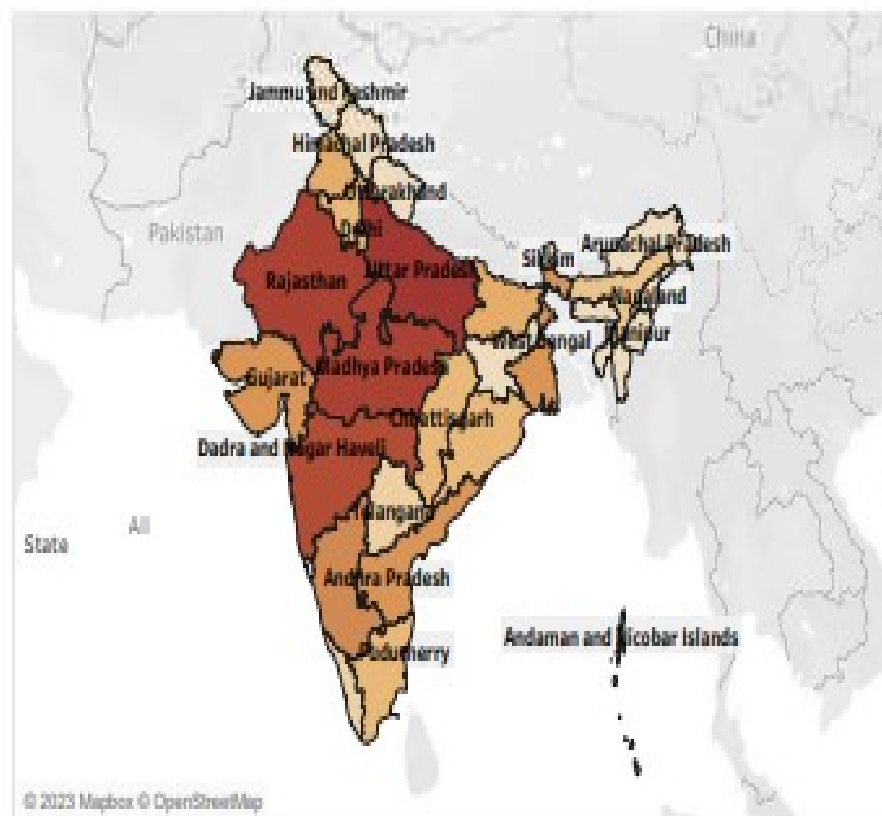
North

3,991,640,301

East

4,030,580,636

### Statewise Agricultural Land



### Area Vs Production

542,672,635	Uttar Pradesh	4,442,585,306
492,087,994	Madhya Pradesh	824,851,676
486,453,365	Rajasthan	589,164,332
461,939,552	Maharashtra	1,878,564,918
257,907,399	Karnataka	63,772,797,345
238,925,335	Andhra Pradesh	26,076,218,605
237,682,265	West Bengal	8,941,179,120
222,434,333	Gujarat	807,581,678
167,995,431	Bihar	544,953,533
162,040,200	Punjab	781,551,409
Area		<div>0B 20B 40B 60B</div> <div>Production</div>

## DASHBOARD 2

PREVIOUS

### Production in tonnes region-wise

NEXT

West

South

North-East

North

East

326,242,956,201

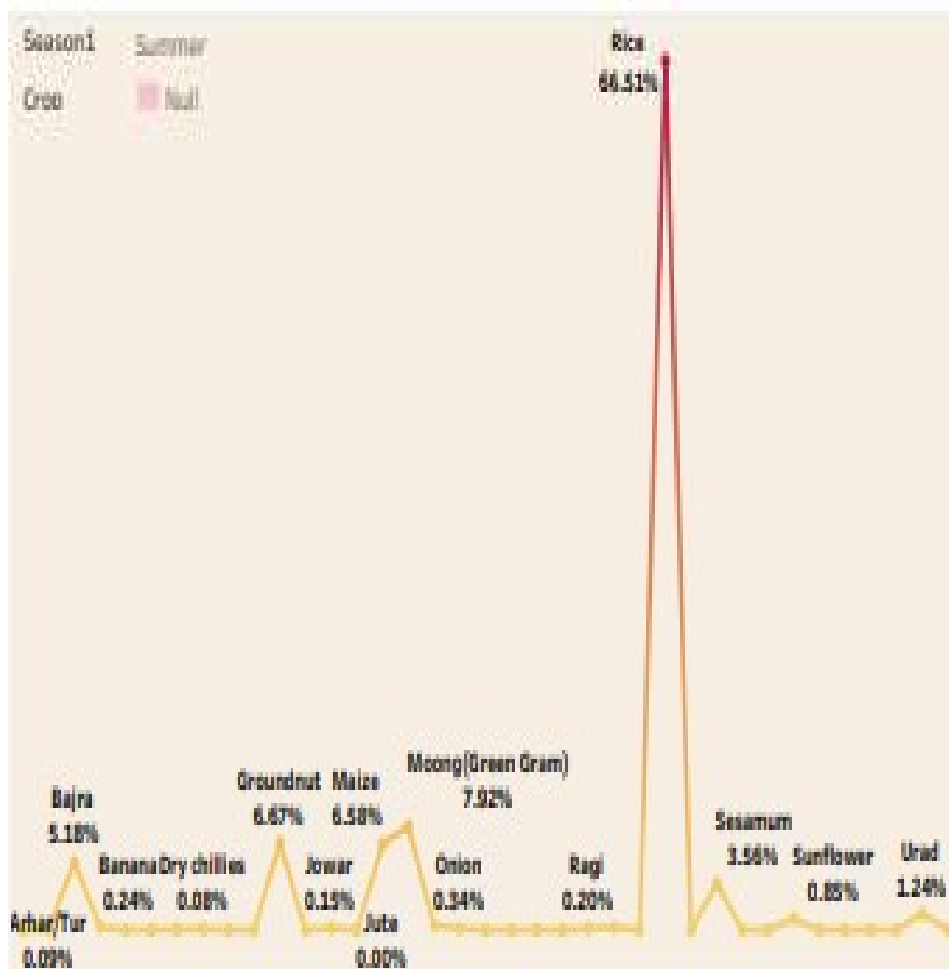
326,242,956,201

326,242,956,201

15,438,183,623

326,242,956,201

### Season Based cultivation area



### Crop Plantation by Area



### Crops (Plantation by count)

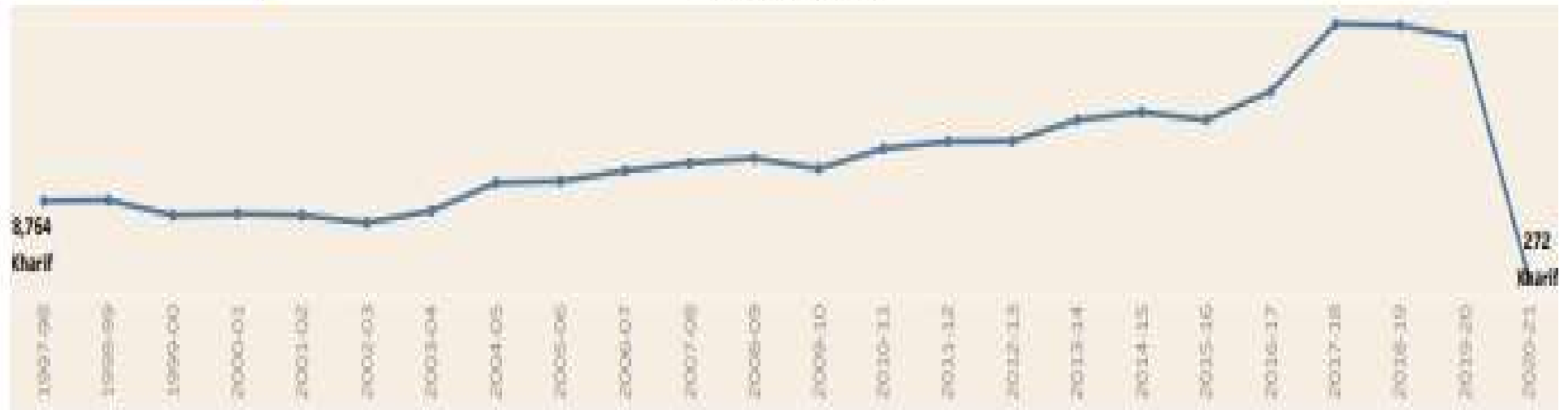


## DASHBOARD 3

PREVIOUS

### Yield by season

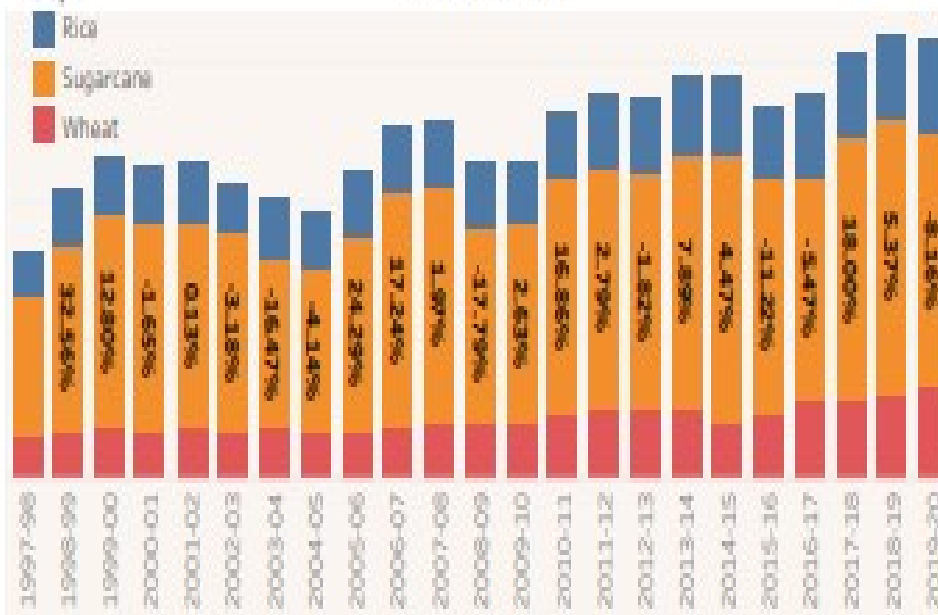
Season1 Kharif



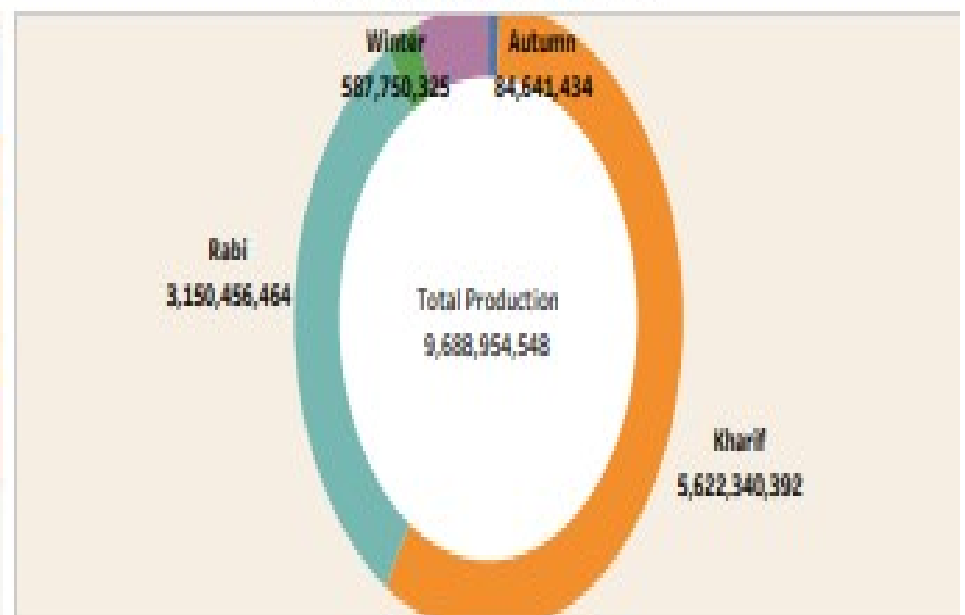
### Major Crops

Crop1

Rice  
Sugarcane  
Wheat

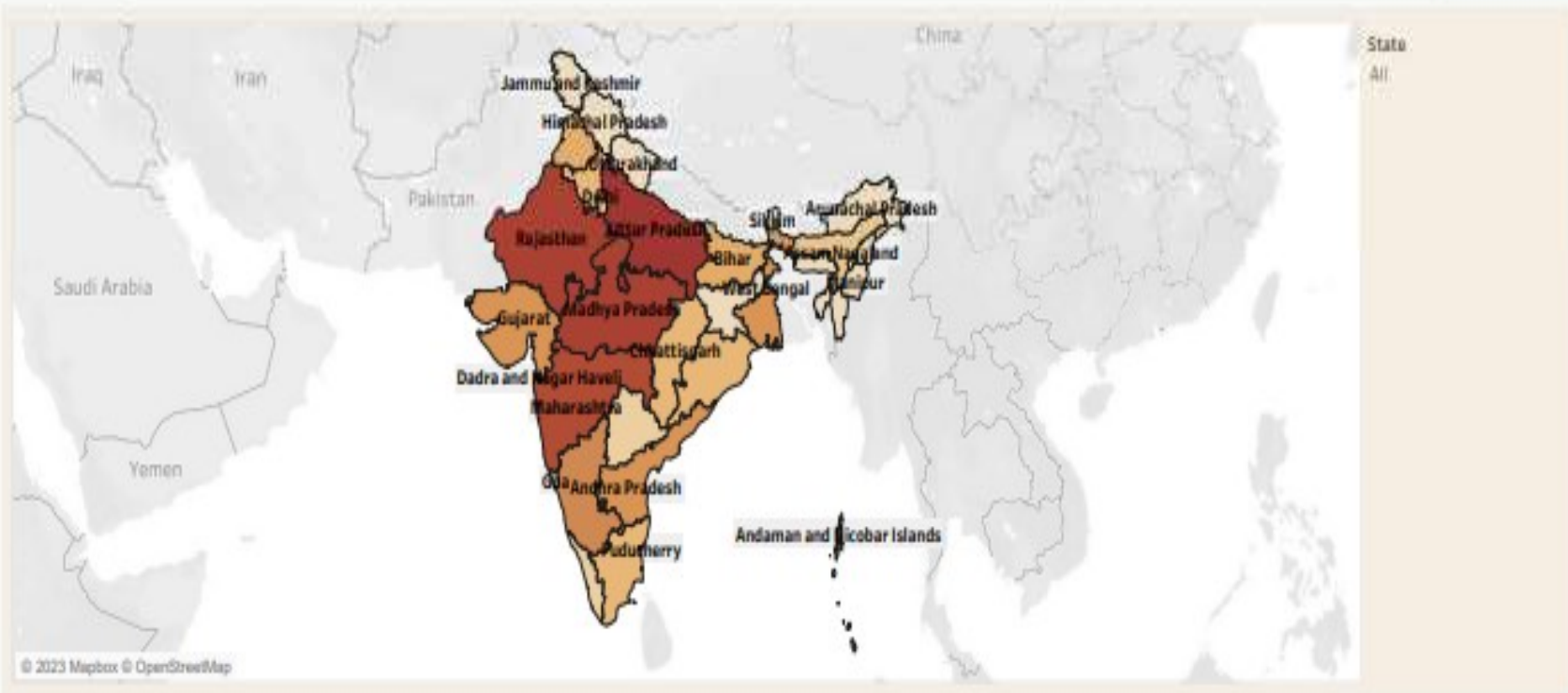


### Season wise production



## Insights into India's Agricultural Cultivation

Statewise Agricultural Land	Area Vs Production	Yield by Season	Major Crops	Crop Plantation by Area	Crops (Plantation by count)	Season wise production
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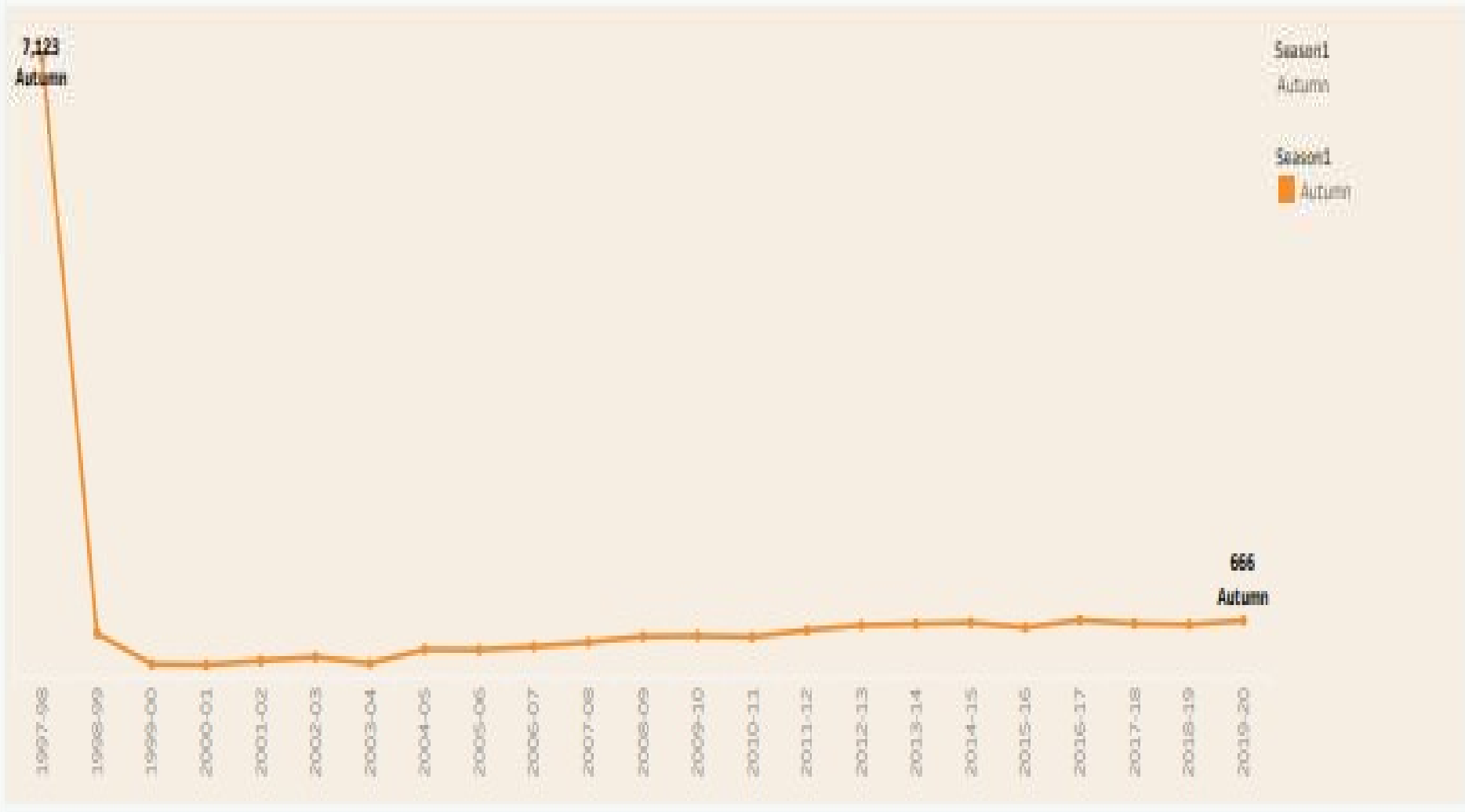
Insights into India is Agricultural Cultivation

Statewise Agricultural Land	Area Vs Production	Yearly Season	Major Crops	Crop Plantation by Area	Crops(Plantation by count)	Season wise production
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## Insights into India's Agricultural Cultivation

Statistics Agricultural Land	Area vs Production	Yield by Season	Major Crops	Crop Plantation by Area	Crops(Plantation by yield)	Season wise production
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## Insights into India's Agricultural Cultivation

Statewise Agricultural Land	Area vs Production	Yield by Season	Major Crops	Crop Plantation by Area	Crop Plantation by Land	Season wise production
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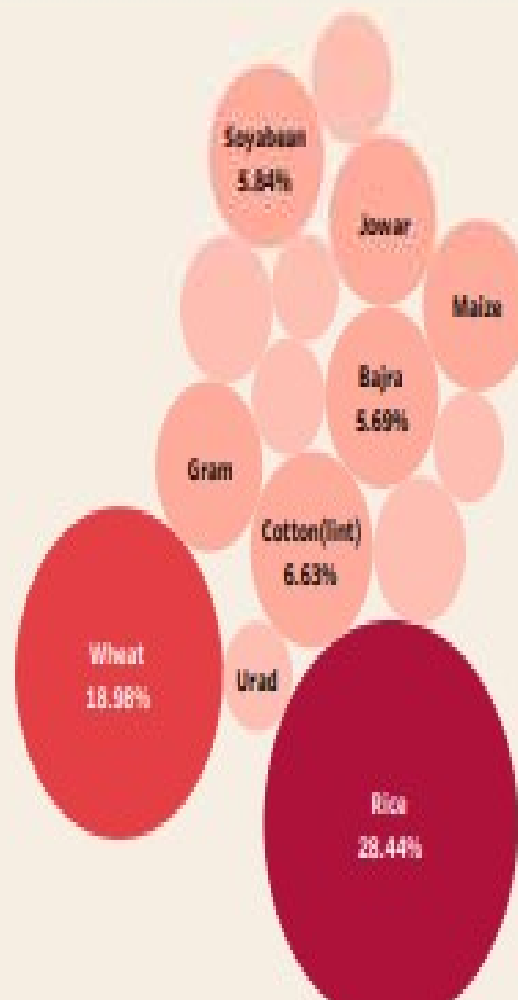
## Insights into India's Agricultural Cultivation

Statewise Agricultural  
Land

Area vs Production

Yield by Season

Major Crops

Crop Plantation by  
AreaCrops Plantation by  
(count)Season wise  
production



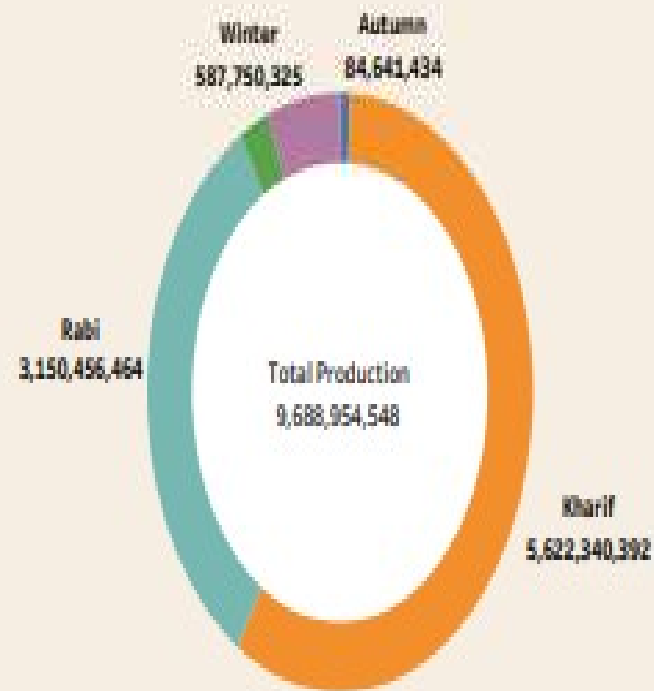
## Insights into India's Agricultural Cultivation

State-wise Agricultural Land	Area vs Production	Yield by Season	Major Crops	Crop Plantation by Area	Crops (Plantation by count)	Season wise production
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## Insights into India is Agricultural Cultivation

Statewise Agricultural Land	Area in Production	Yield by Season	Major Crops	Crop Plantation by Area	Crops (Plantation by count)	Season wise production
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Season

- Autumn
- Kharif
- Rabi
- Summer
- Winter



# APPLICATIONS

- ❖ India's agriculture sector is primarily focused on food production, including rice, wheat, sugarcane, pulses, and various fruits and vegetables, to feed its large population.
- ❖ Livestock rearing, including cattle, poultry, and dairy farming, is an essential part of Indian agriculture, providing meat, milk, and other products.



# CONCLUSION

- ❖ India's agriculture sector is the backbone of the country's economy, employing a significant portion of the population and contributing substantially to the GDP.
- ❖ It plays a critical role in ensuring food security for the nation by producing a wide variety of crops, from staples like rice and wheat to fruits and vegetables.





# FUTURE SCOPE

The future scope of India's agriculture lies in embracing innovation and sustainability to meet the evolving needs of a growing population, while also addressing climate change challenges.



Thank  
You