

## **1. INTRODUCTION**

Agriculture is a backbone of the India economy. It is an activity and is closely related to the natural environment. Agriculture is also called farming or husbandry. The term agriculture has been derived from the Latin word “AGER” meaning field and “CULTURA” meaning cultivation. Food grains are the most important agricultural products made in India. India exports agro products like tea, coffee, spices etc.. Around 58% population of India depends on agriculture.

### **1.1 OVERVIEW**

India is among the highest-ranking countries in production volume for various commodities like rice, cotton, dairy, fruits, vegetables, meat and seafood. Some claim Indian agriculture began by 9000 BC as a result of early cultivation of plants and domestication of crops. Agriculture is a main source for livelihood; it provides a source for the people to earn. Most of the population in the rural area is dependent on agriculture as their main source of income.

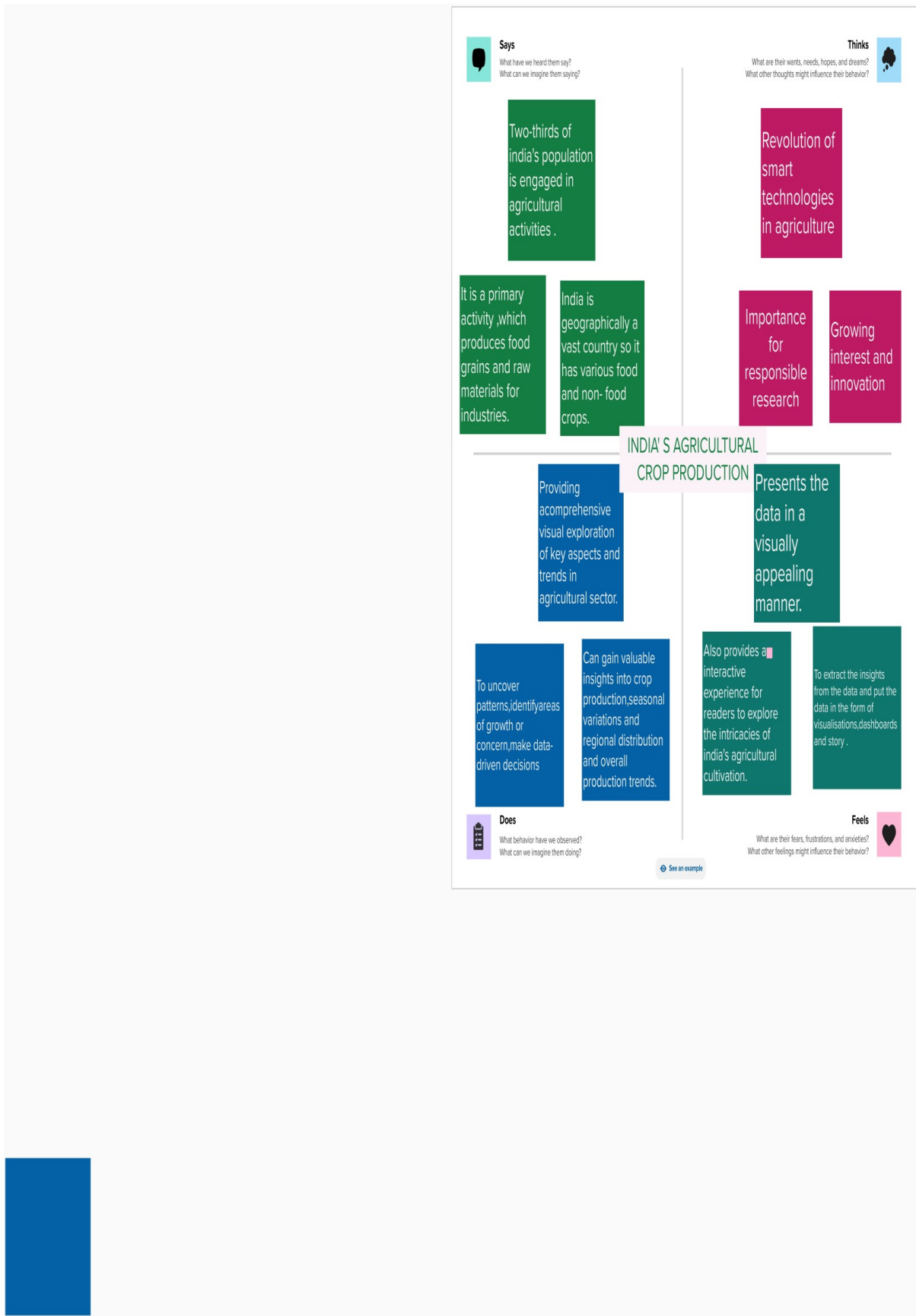
Its gross irrigated crop area of 82.6 million hectares (215.6 million acres) is the largest in the world. India is one of the major players in the agriculture sector worldwide and it is the primary source of livelihood for ~55% of India's population. Consumer spending in India will return to growth in 2021 post of the pandemic-led contraction, expanding by as much as 6.6%. Thus, farmers become an integral part of the sector to provide us with a means of sustenance.

### **1.2 PURPOSE**

All humans depend on agriculture for food. Urban-industrial societies depend on the base of food surplus generated by farmers and herders. Without agriculture there could be no cities, universities, factories, or offices. Today agriculture remains the most important economic activity in the world. Agriculture employs 45% of the working population (only two percent in US). In some parts of Asia and Africa, over 80% of the labor force is engaged in agriculture.

2.PROBLEM DEFINITION AND DESIGN THINKING

2.1 EMPATHY MAP



### Define 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.

5 minutes

Agriculture serves as a vital source of livelihood for a large portion of the population, especially in rural areas.

### Key rules of brainstorming

- Stay in topic
- Encourage wild ideas
- Defer judgment
- Listen to others
- Go for volume
- If possible, be visual

### Brainstorm

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

15 minutes

Tip: You can select a sticky note and fill the speech bubble to select it for later sharing

ABITHA G	ARCHANA K	HEMAVATH K	NIVETHA M
Fostering social cohesion and preserving cultural traditions	For various industries, such as food processing, textiles, for pharmaceuticals	Agriculture influences national income and agriculture plays a vital role in generating employment.	Market for industrial products and influence on internal and external trade.
Agriculture contributes to the overall socio-economic development of rural communities.	It contributes to the country's GDP and serves as a source of raw materials.	The growth and productivity of the agricultural sector have direct implications for the overall economic performance and stability of the nation.	Agriculture makes provision for food for the ever-increasing population.
It plays a crucial role in ensuring food security and alleviating poverty by providing employment opportunities and income generation.	The agricultural sector plays a pivotal role in India's economy.	Can lead to increased profitability and competitiveness for agricultural businesses.	Contribution to capital formation and supply of raw material to agro-based industries.

### Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

Tip: Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize related ideas in between when you meet.

Fostering social cohesion and preserving cultural traditions	Agriculture influences national income and agriculture plays a vital role in generating employment.
It contributes to the country's GDP and serves as a source of raw materials.	Agriculture makes provision for food for the ever-increasing population.

### Prioritize

You're team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

Tip: Each person can use their colored pens to place sticky notes around the grid. The facilitator can continue to assist in using the team's preferred tool for the sticky notes to be important.

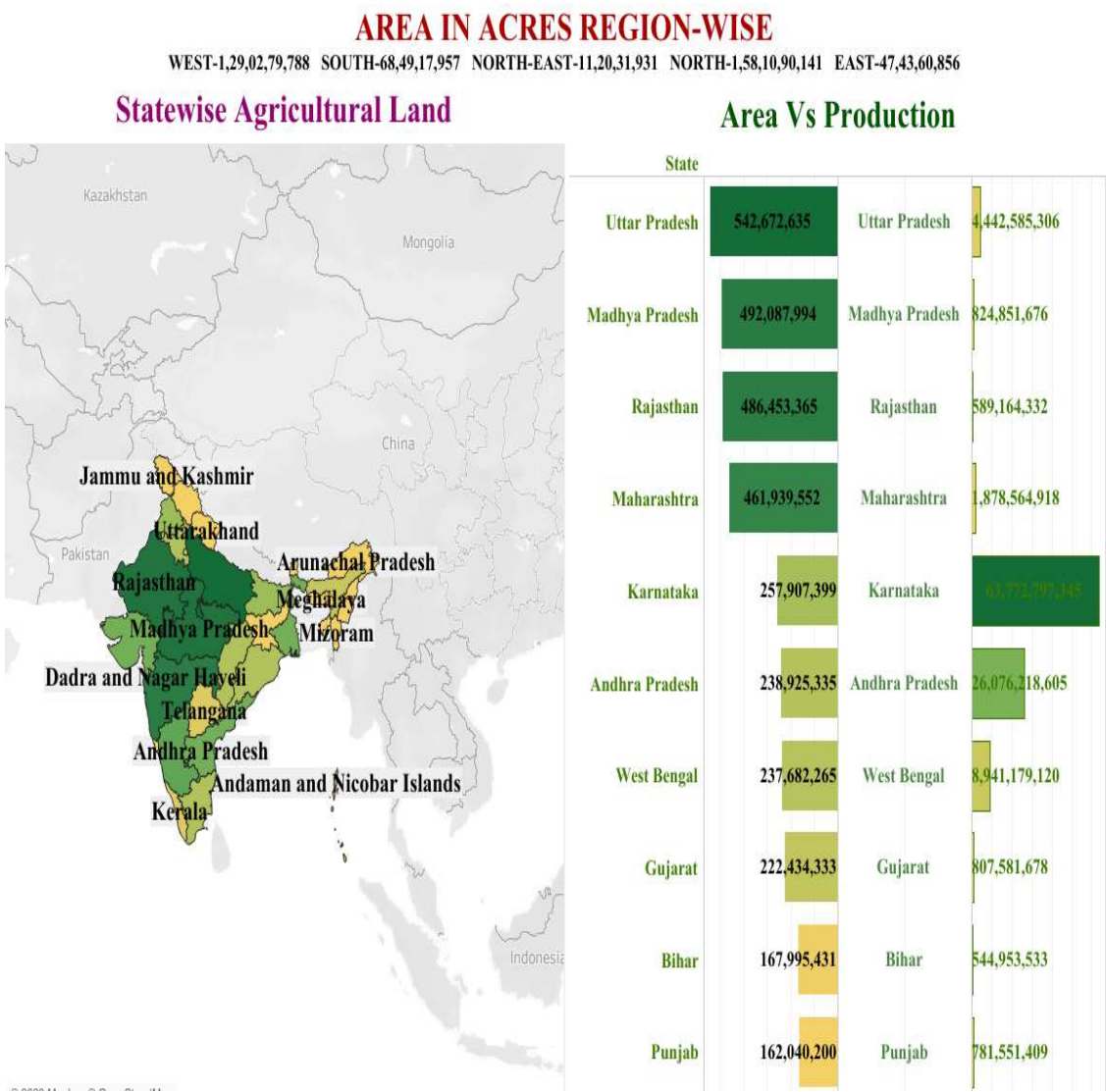
Importance

Feasibility

Regardless of their responses, which ideas are most feasible for others? (Can we, affect, company, etc.)

3. RESULT

3.1 DASHBOARD



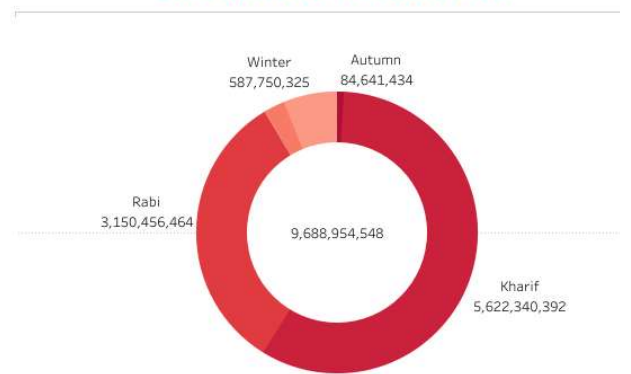
## Yield by season



## Major crops



## Seasonwise Production

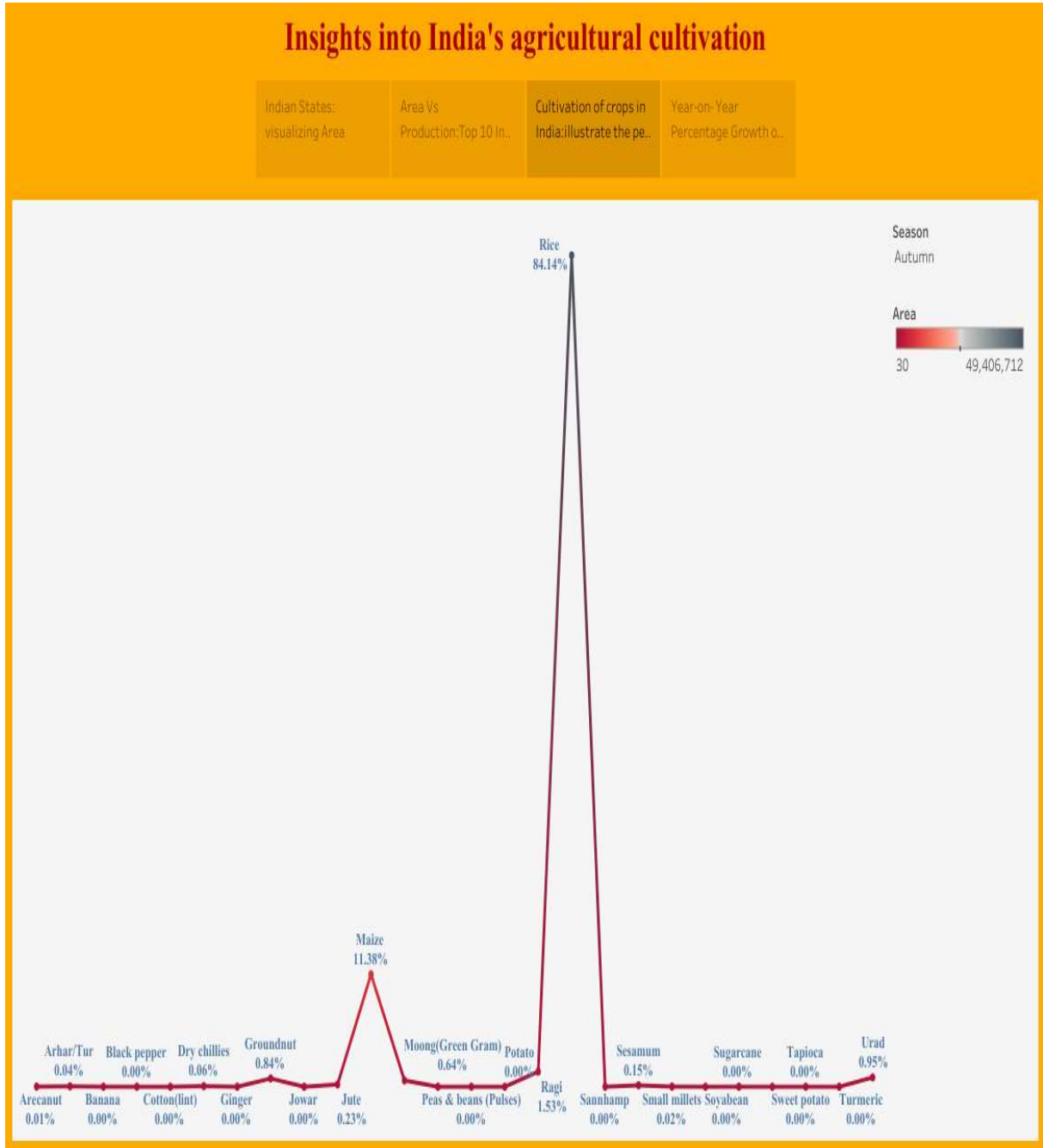


## Insights into India's agricultural cultivation

Crop Yield Growth:Year	Crop Planting Percentage	World Cloud:The following word	Crop Production in Tonnes:Season
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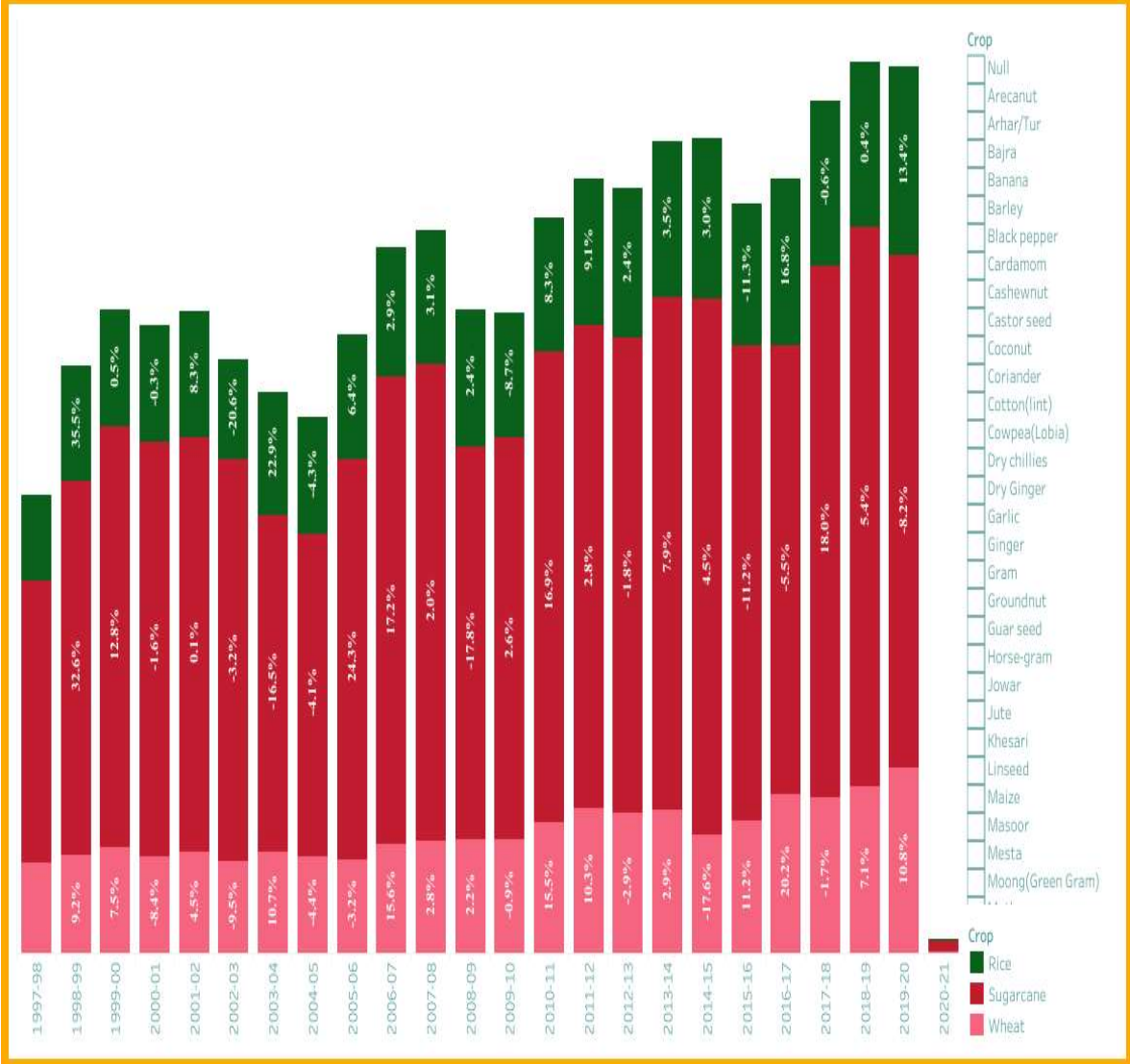


3.2 STORY



# Insights into India's agricultural cultivation

Indian States: visualizing Area	Area Vs Production: Top 10 In..	Cultivation of crops in India: illustrate the pe..	Year-on- Year Percentage Growth o..
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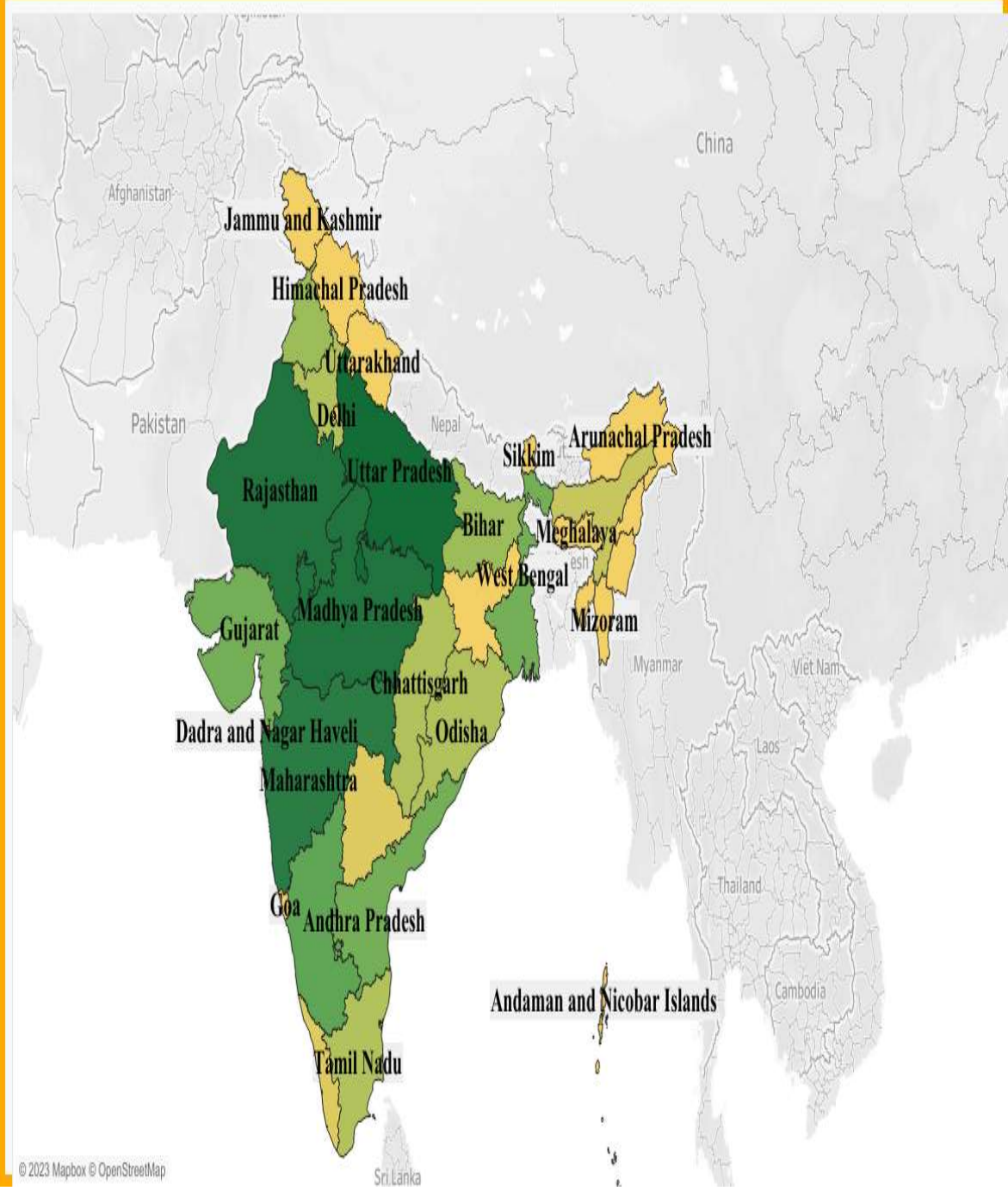
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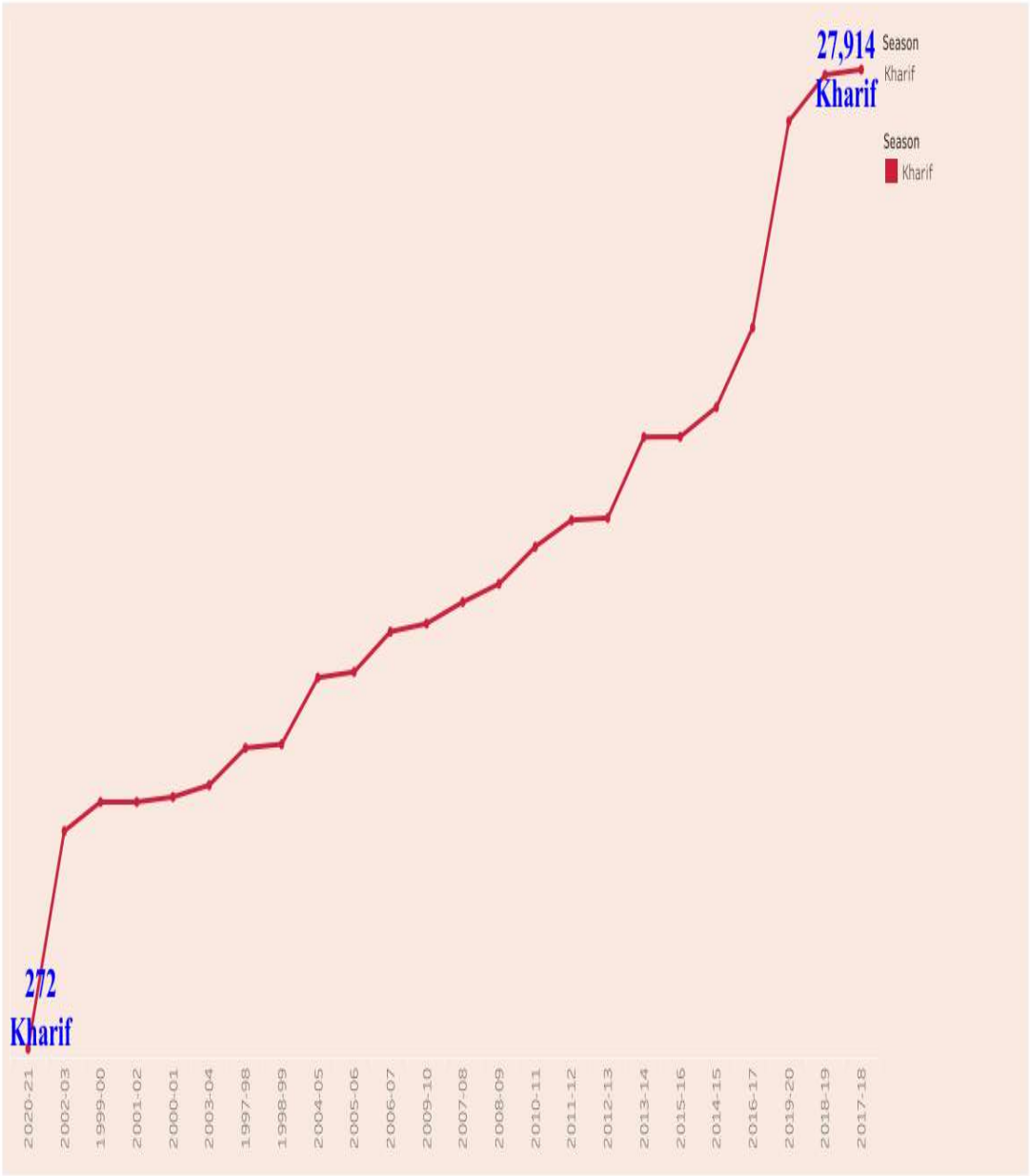
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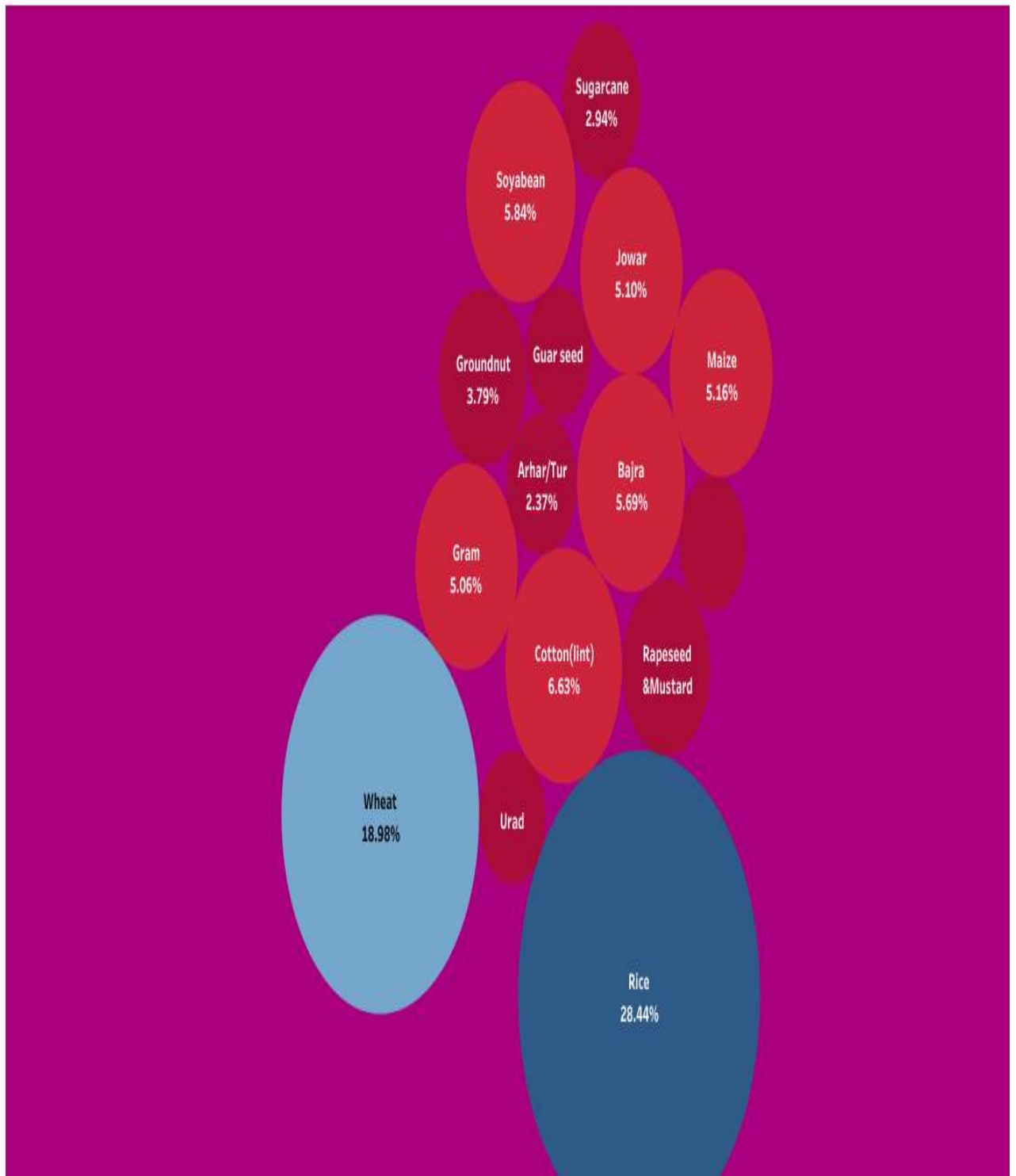
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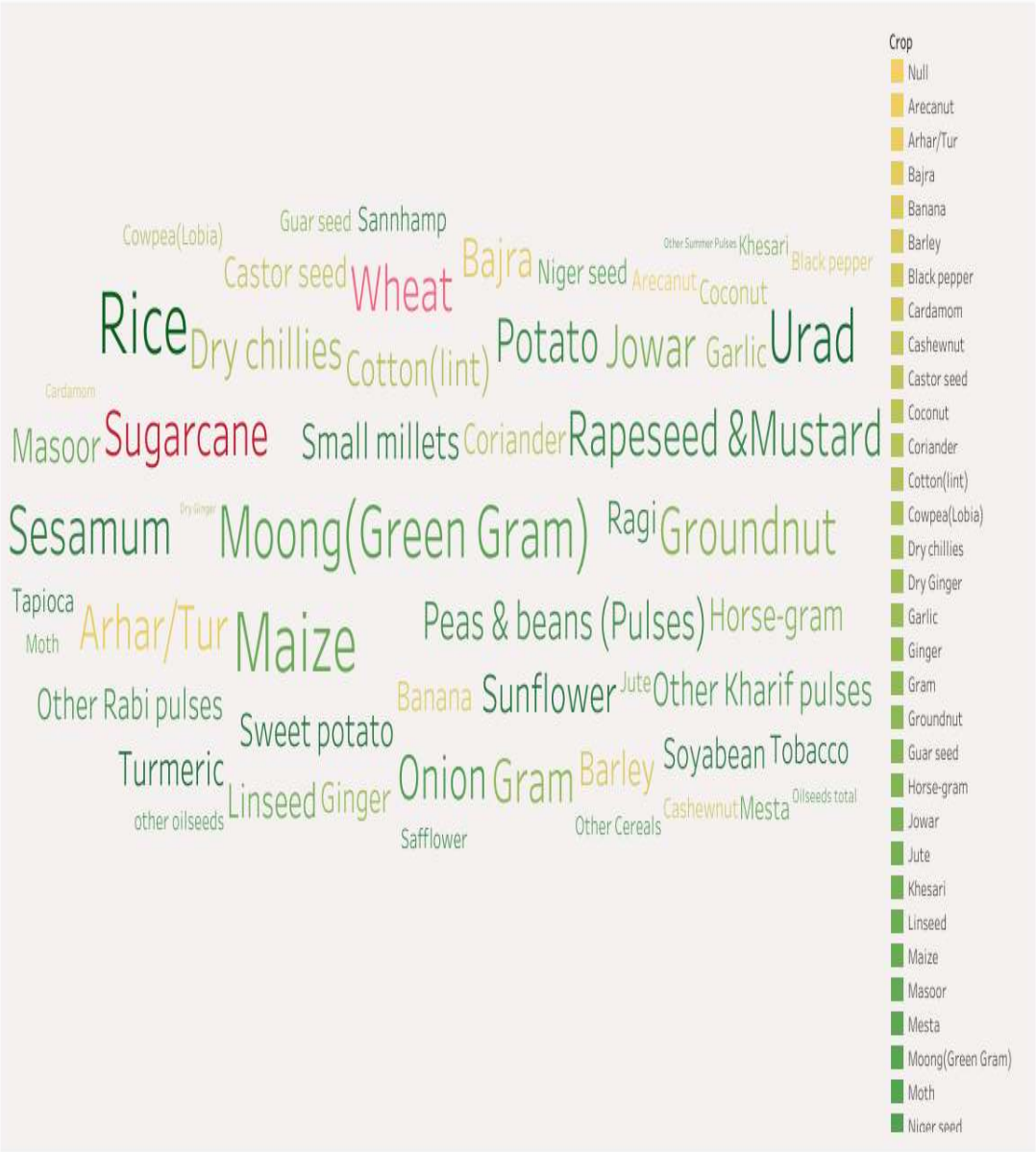
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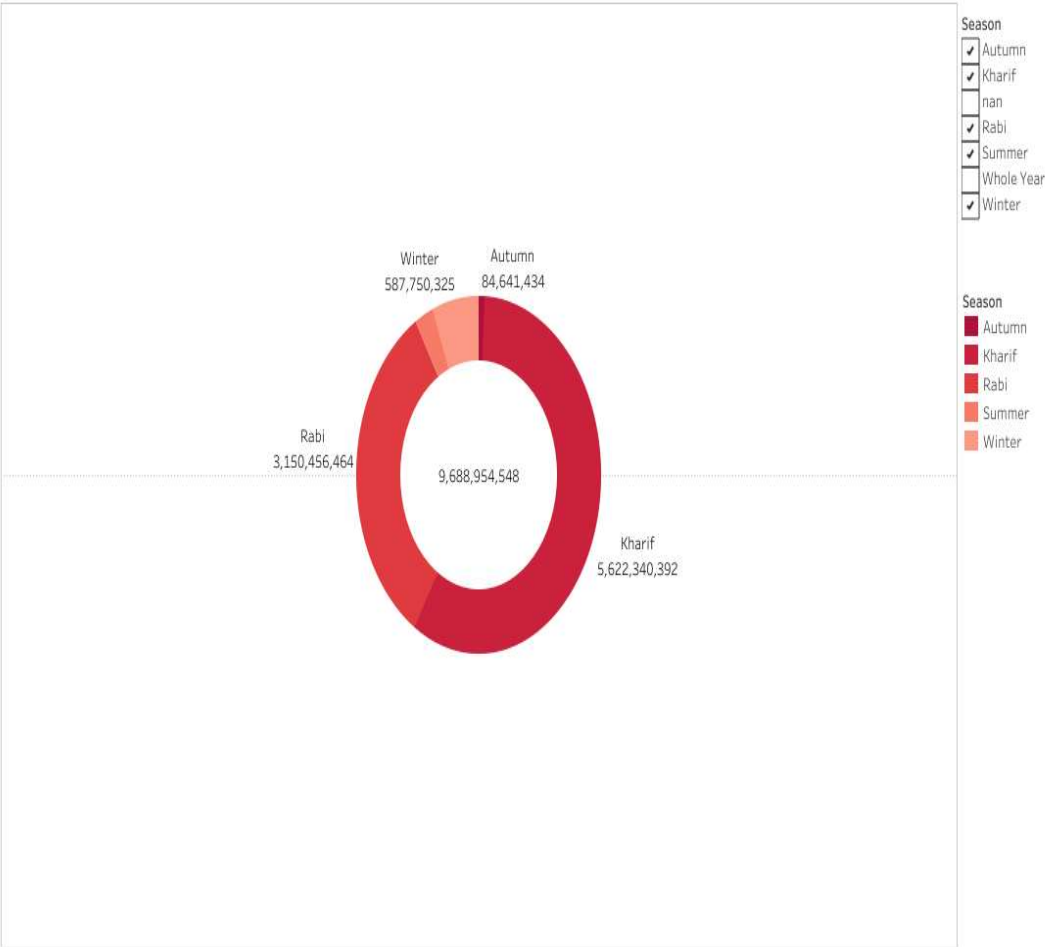
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## **4. ADVANTAGES AND DISADVANTAGES**

### **4.1 ADVANTAGES**

- Organic farming usually goes down in a natural environment. Unnecessary enclosures are not used for the crops or plants .
- An open and natural area for growing the crops would give them wild and instinctive growing nature.
- Unlike other forms of farming ,organic farming does not involve any artificial sources like chemicals to drive away pests or to speed up the process of farming.
- These chemicals are often used in commercial and industrial farming methods .
- Unlike any other procedure, organic farming has a very strict supervision schedule.
- The reason for this extreme regulation is because of the importance to keep the label organic.
- Today, almost the entire sector of industrial farming consists of chemicals that rain the environment.
- When you have something like organic farming to replace it, a huge benefit is received.
- Since non-organic farming produces results that are way too suspicious when eaten it is obvious that it isn't good for health.
- Since the fruits and vegetables grown organically are given longer time to flourish, they automatically are way better in terms of nutrition and taste.

### **4.2 DISADVANTAGES**

- One of the major problems of organic farming methods is that sometimes it can get a bit costly .The people to not be able afford it.
- In a country like india where most of its livelihood are farmers,organic farming bring a huge problem.How ever,organic farming in tamilnadu have had some success stories.
- Organic farming is a sector that requires a lot of patience.This is because pests and other obstacles must be tackled manually.
- Organic farming has to be executed well which needs a lot of time and not to forget weed-prevention.

- It is almost obvious that due to the extreme care taken to go along with organic farming, the results would be kept at a high price.
- So, we can say that organic items are expensive and not every consumer is willing to pay the price for it.
- The seeds of genetical modified organism plants once planted, create genetical modified organism crops.
- This makes it very difficult to tell from the organic and genetical modified organism crops. This has a huge problem in organic farming sector.
- In organic farming, one is not able to do it by oneself, a lot of labour would be hired which increases the payment that those labours deserve.
- So, people are starting to prefer organic farming and performing such practises-like mushroom cultivation, aloe vera farming, sugarcane cultivation, etc..

## **5. APPLICATIONS**

- Spraying weedicides on the weeds.
- Manually plucking the weeds by hands.
- Removing weeds by trowel and harrow.
- Ploughing the field to remove the weeds even before sowing the seeds.
- The process of separating the grains from their chaffs or pods is threshing.
- After threshing, we must separate the grains from the chaffs. Winnowing is the process of separating the grains.
- Cultivated grains must be stored safely to avoid product loss.
- Chances of grain loss are much higher during this time than before cultivation.
- Common pests and rodents and some environmental conditions like humidity and temperature are the responsible factors for the loss.
- According to modern agricultural technologies, there are various tools for managing weeds, insects, and diseases.

## **6. CONCLUSION**

On overall view, India has always been benefited by AGRICULTURE. Though the future of india is industrialiation, the contribution of agriculture would always prove to be vital for making india a powerful and stable economy in the future. The agricultural sector is playing a very important role in the country like india and the prosperity of the Indian economy still largely depends on agricultural sector. Agricultural development is the basic pre-condition of sectoral diversification and development of the economy.

## **7. FUTURE SCOPE:**

- There will be more of vertical and urban farming and there will also be efforts in long term to find new areas for production like barren deserts and sea water .
- “By 2050,there will be gene-edited crops ,and it will trigger a much wider variety of crops being grown”.
- In by 2030 needs a hectare of land to feed five persons against two at present.
- Projects that demand for food,agriculture and fisheries products will continue to grow over the next decade.
- There is a bright future in agriculture field.