

# Project Report Template

## 1 Introduction

### 1.1 Overview

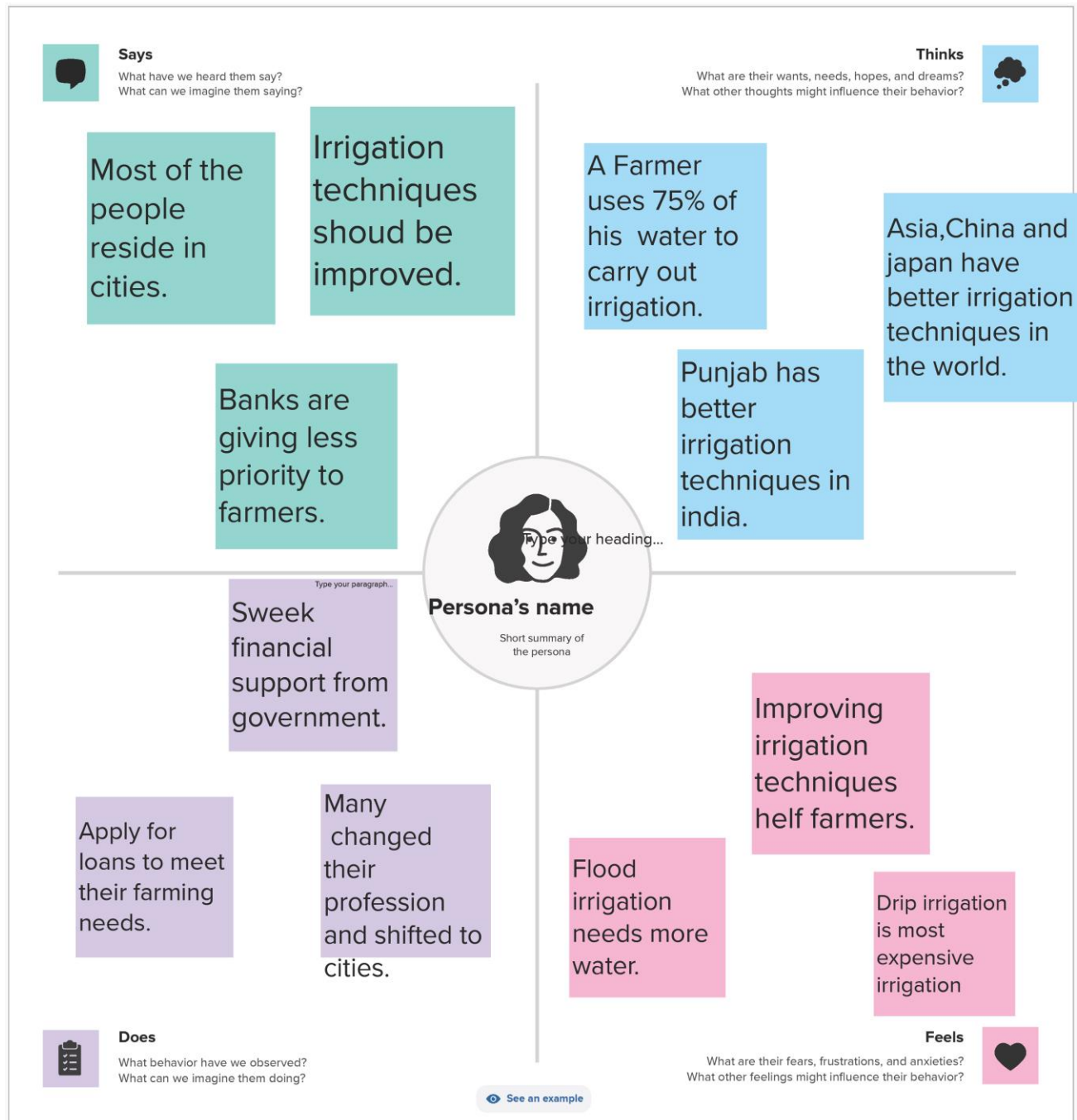
India's already large population is expected to become the world's largest in the next 20 years, while economy will soon overtake Japan's to become the world's third largest. The resulting increase in the demand for food will need to be met through higher agricultural productivity or by increasing food imports. This article discusses sum of the key areas of progress and challenges for India's agricultural sector, including, productivity, water management, government policies and programs, and food distribution and storage.

### 1.2 Purpose

India has a particular large agricultural sector. While the sector's share of GDP has halved in the past 30 years to around 15 per cent, it still employs around half of India's workforce and accounts for much of the volatility in Indian GDP. India has the second largest area of arable land in the world and is major producer of a number of agricultural products (Table 1). Around the turn of the century, India overtook the United States as the world's largest producer of milk and is also a major producer of pulses, such as chickpeas and lentils, which are major sources of protein in vegetarian diets.

## 2 Problem Definition & Design Thinking

### 2.1 Empathy Map



## 2.2 Ideation & Brainstorming Map

### Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

10 minutes to prepare  
 1 hour to collaborate  
 2-8 people recommended

**Before you collaborate**

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

Team gathering  
 Define who should participate in this session and send an invite. Share relevant information or prework ahead.

Set the goal  
 Try to describe the problem you'll be focusing on solving in one to three concise sentences.

Learn how to use the facilitation tools  
 Use the facilitation tools provided to facilitate a topic and provide feedback.

Open article →

**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

Key rules of brainstorming  
 To run an smooth and productive session:

- Stay on 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.

10 minutes

TIP  
 You can collect a wide range of ideas by asking a series of questions (like "What if...?")

Person 1: Lack of light on facilities, small and fragmented land holdings, lack of high quality seeds  
 Person 2: Lack of knowledge on the agriculture sector, inconsistent information, over-expensive and old tools/equipment, government schemes are yet to reach small farmers  
 Person 3: Lack of use of modern technology, inefficient seed supply, manures/fertilizers and pesticides  
 Person 4: Poor storage facilities  
 Person 5: [Blank]  
 Person 6: [Blank]  
 Person 7: [Blank]  
 Person 8: [Blank]

**Group ideas**

Now that you've generated your ideas, it's time to start organizing them. One method is to group ideas that have been generated. Use each cluster as a sentence for a solution. The cluster is bigger than the sentence. Try to make it 15 words or more. If you have more than one group, try to make it 15 words or more.

20 minutes

Lack of light on facilities, small and fragmented land holdings, lack of high quality seeds, lack of knowledge on the agriculture sector, inconsistent information, over-expensive and old tools/equipment, government schemes are yet to reach small farmers, lack of use of modern technology, inefficient seed supply, manures/fertilizers and pesticides, poor storage facilities

**Prioritize**

Your team should decide on the best ideas that are most important among the ideas. Here you can rank the ideas by their importance and feasibility. The ideas are ranked and are not all are feasible.

20 minutes

TIP  
 The ideas are ranked by their importance and feasibility. The ideas are ranked and are not all are feasible.

Importance  
 Feasibility

High importance, low feasibility: Lack of light on facilities, small and fragmented land holdings, lack of high quality seeds  
 High importance, high feasibility: Lack of knowledge on the agriculture sector, inconsistent information, over-expensive and old tools/equipment, government schemes are yet to reach small farmers  
 Low importance, low feasibility: Lack of use of modern technology, inefficient seed supply, manures/fertilizers and pesticides, poor storage facilities

**After you collaborate**

You can export the final results as an image or PDF or share with your team. If you can't share with your team, you can still share the results with your team.

Quick add-ons  
 Share the final results with your team. If you can't share with your team, you can still share the results with your team.

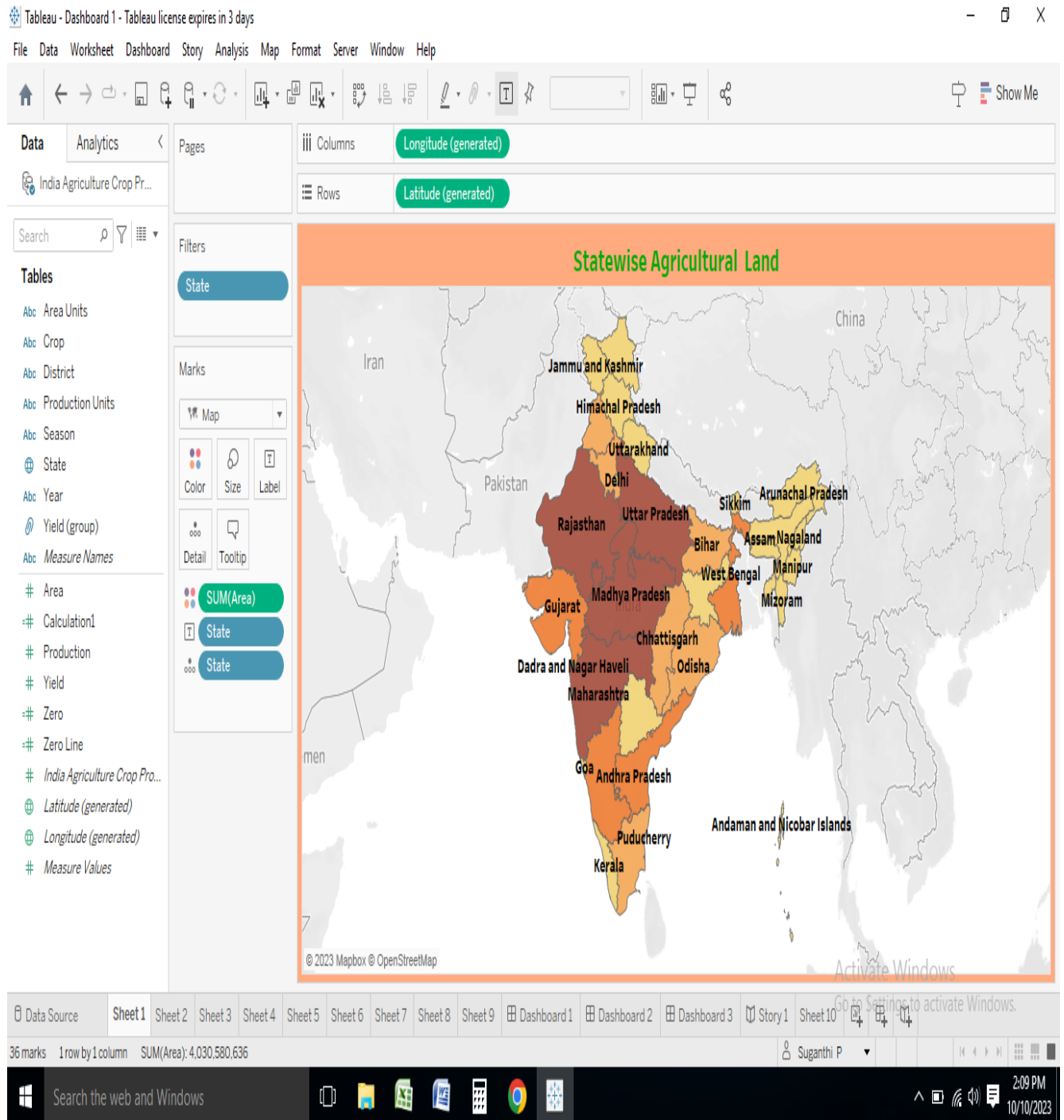
Keep moving forward  
 Generate a list of ideas. If you can't generate a list of ideas, you can still generate a list of ideas.

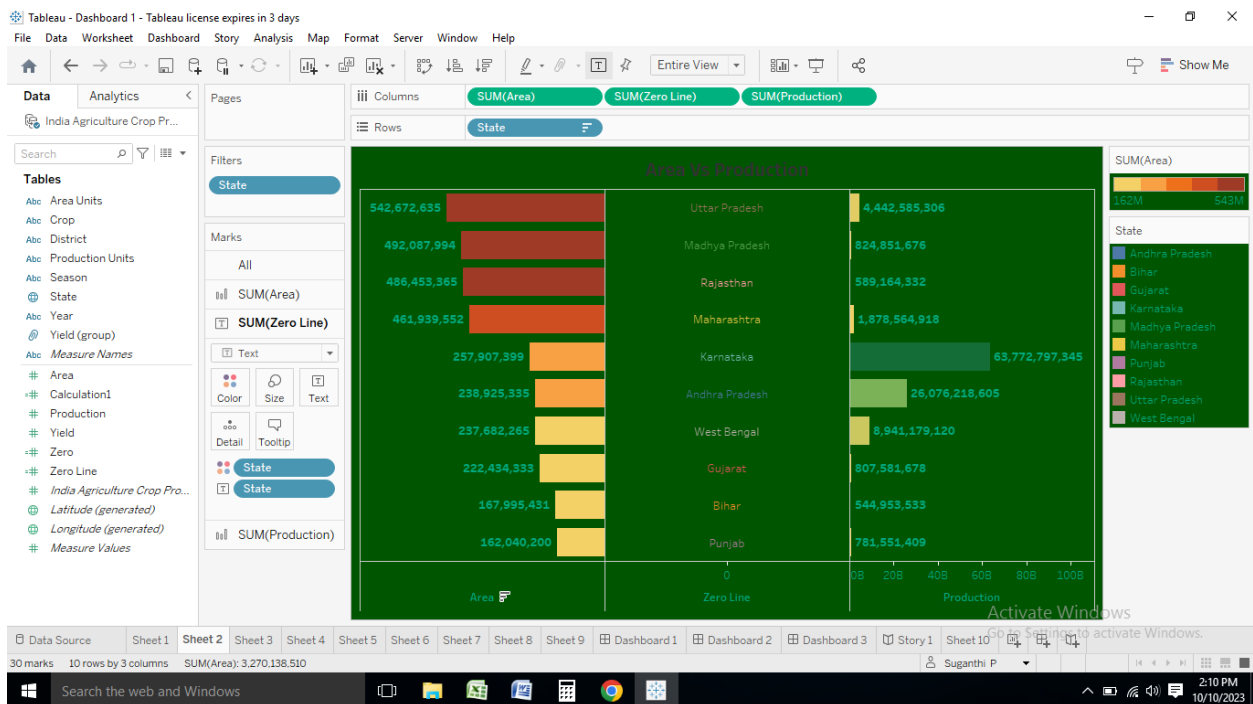
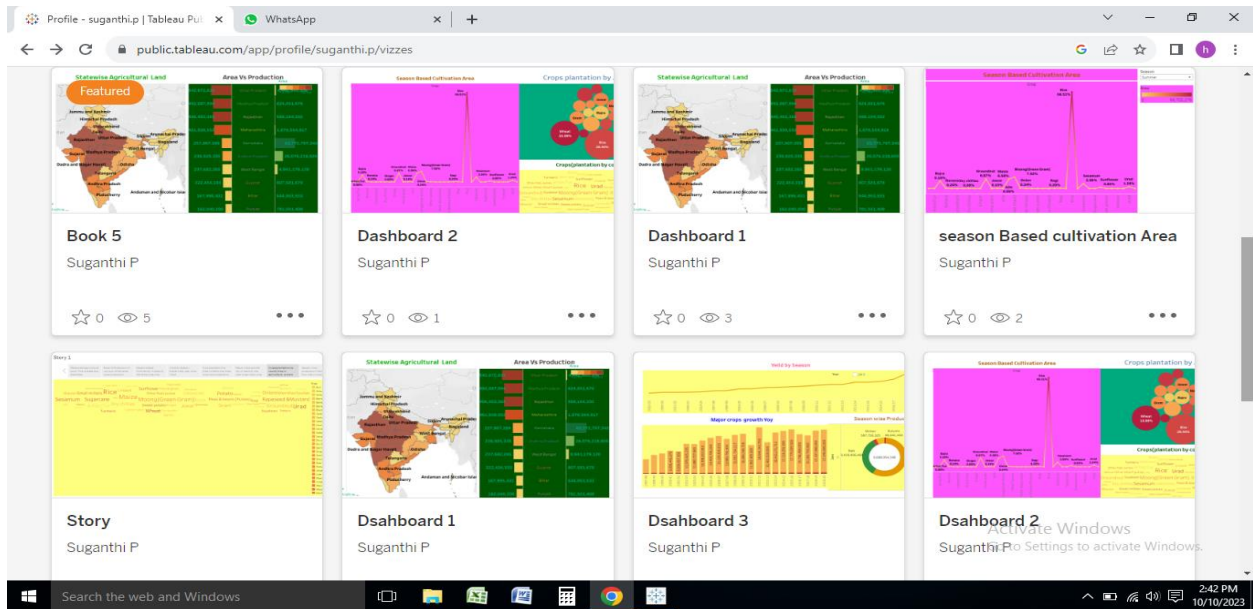
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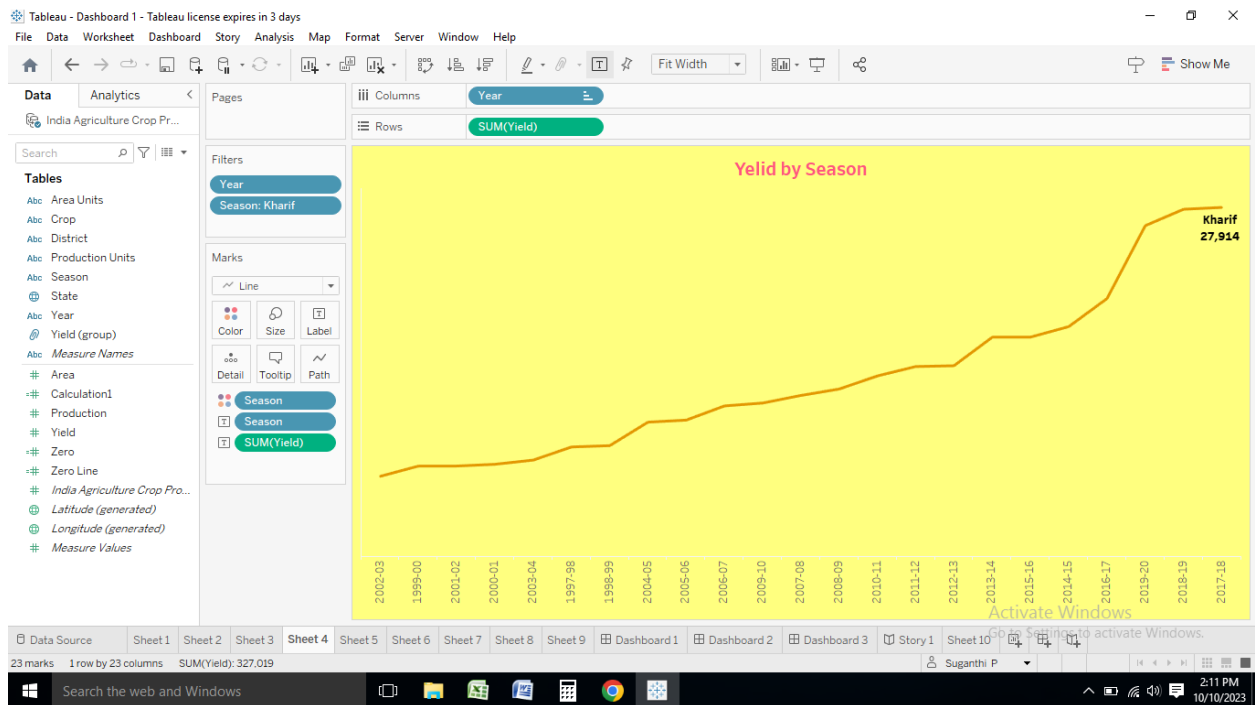
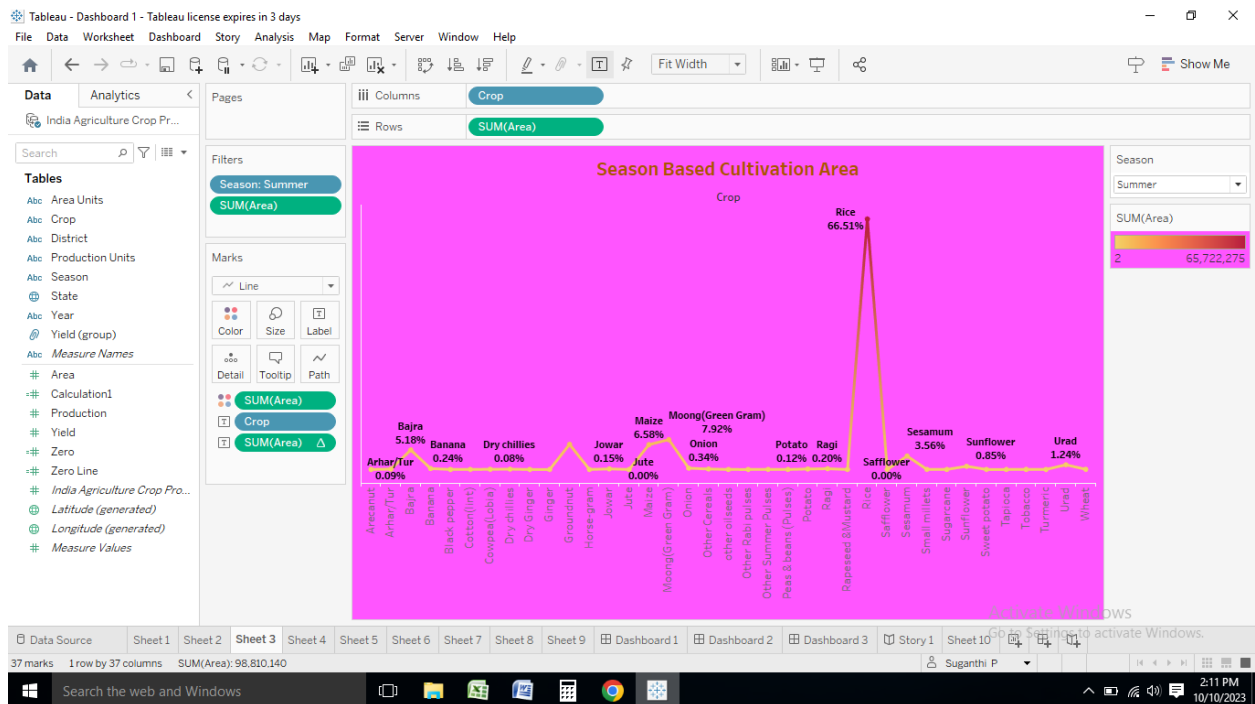
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### 3 RESULT

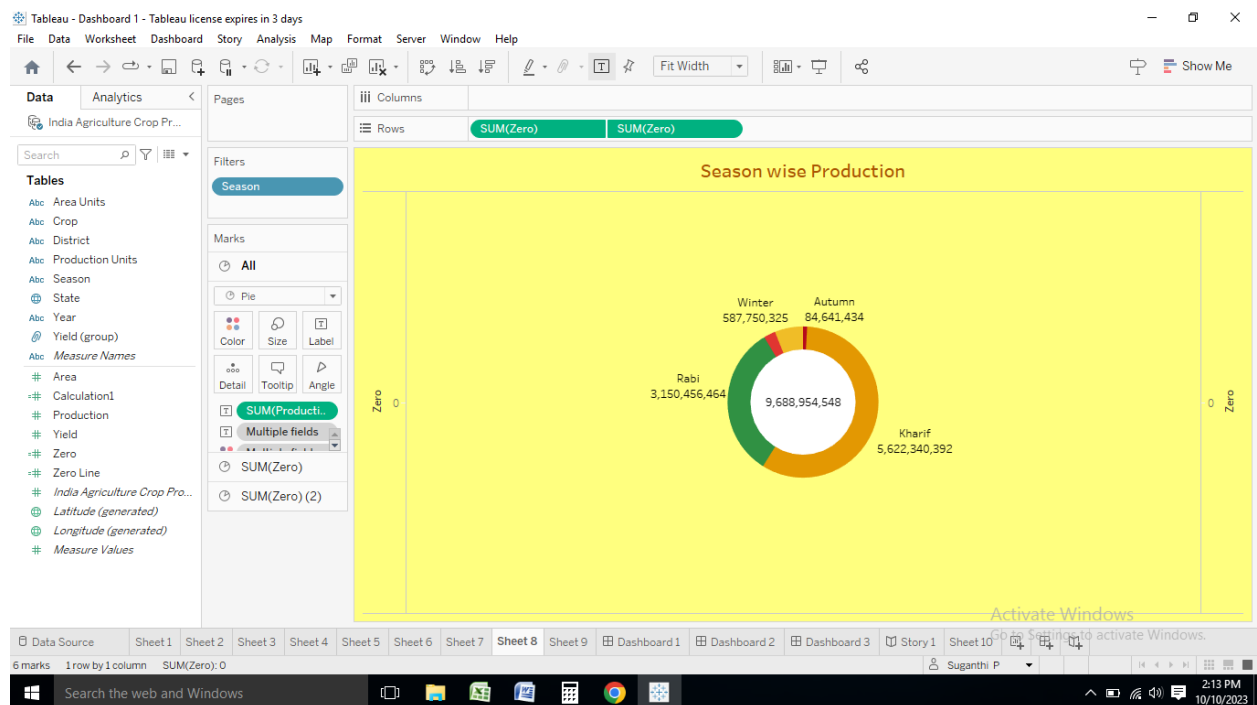
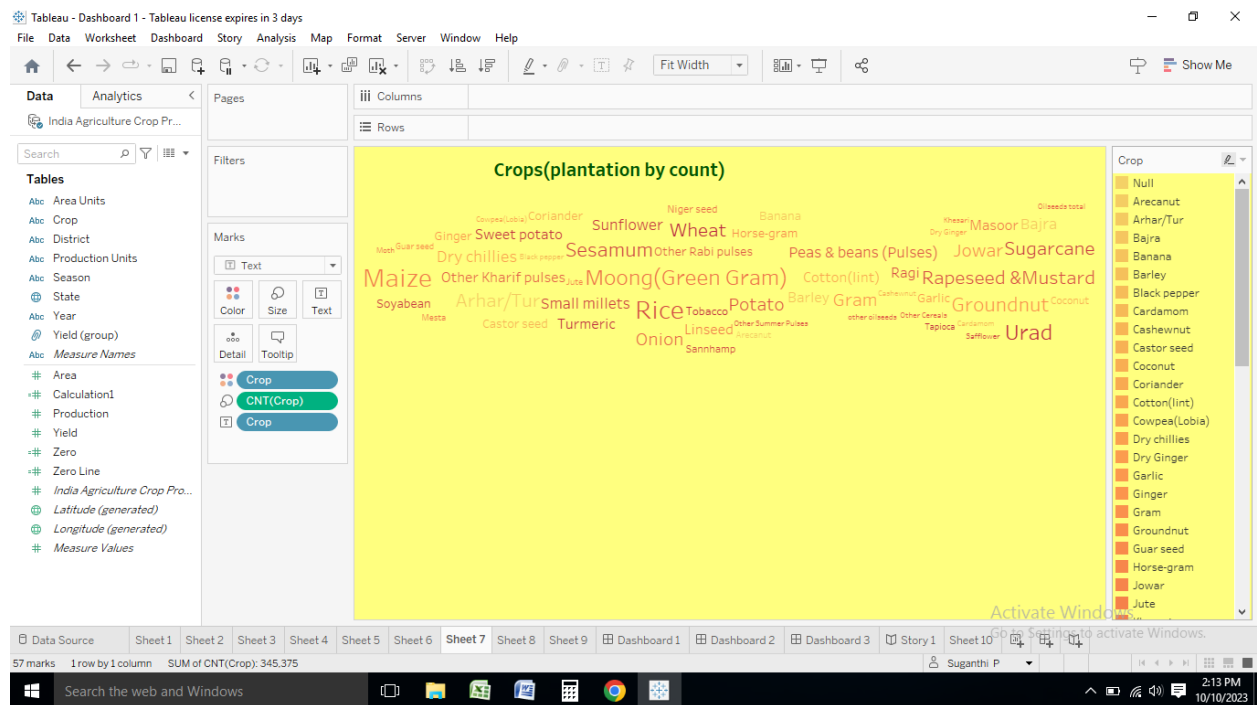






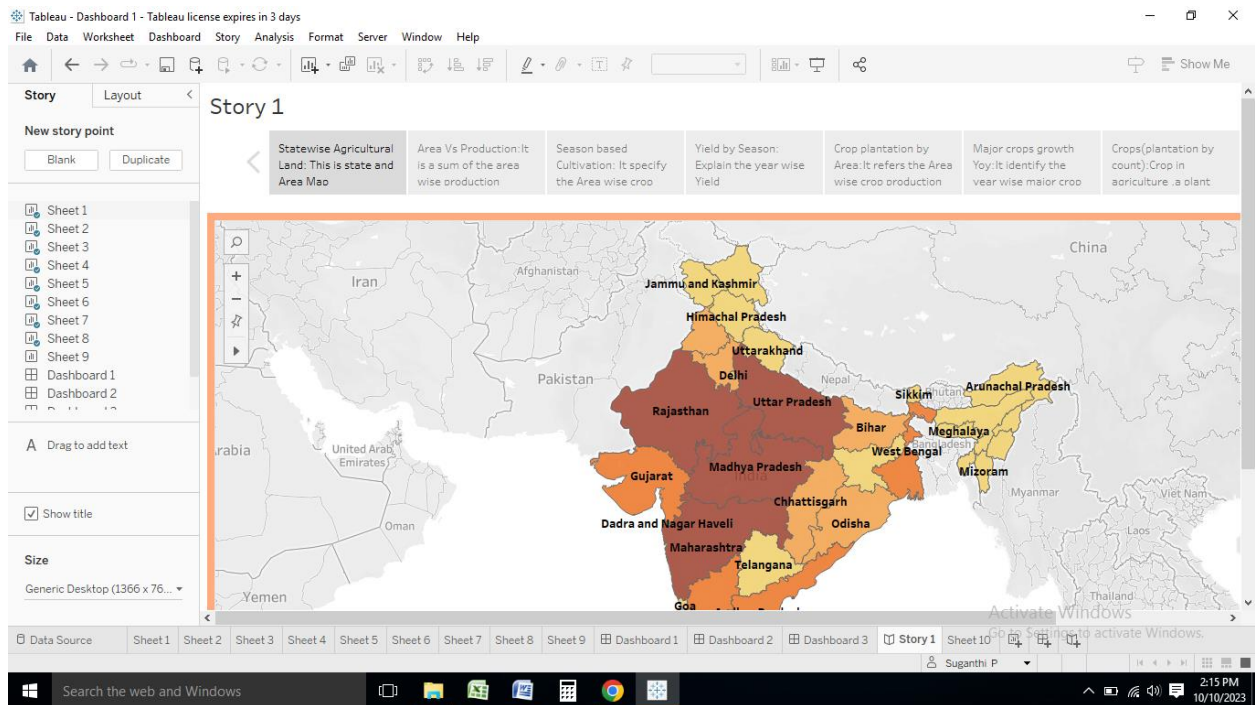
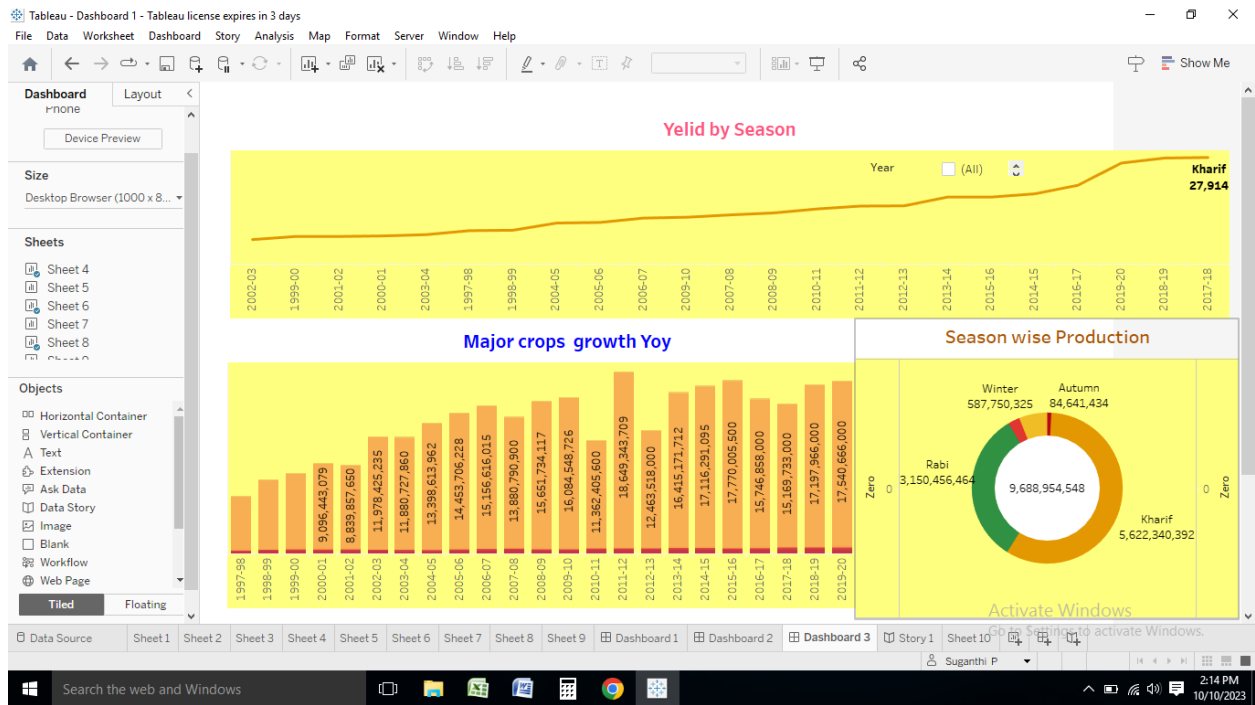


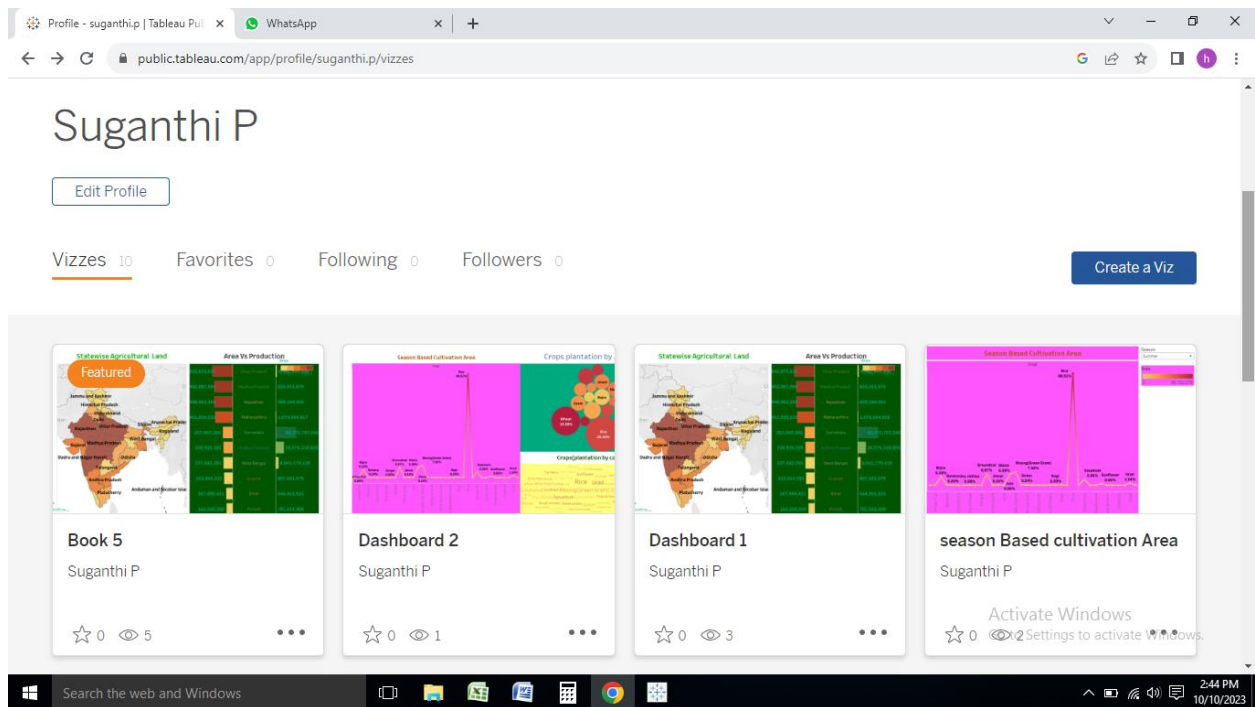
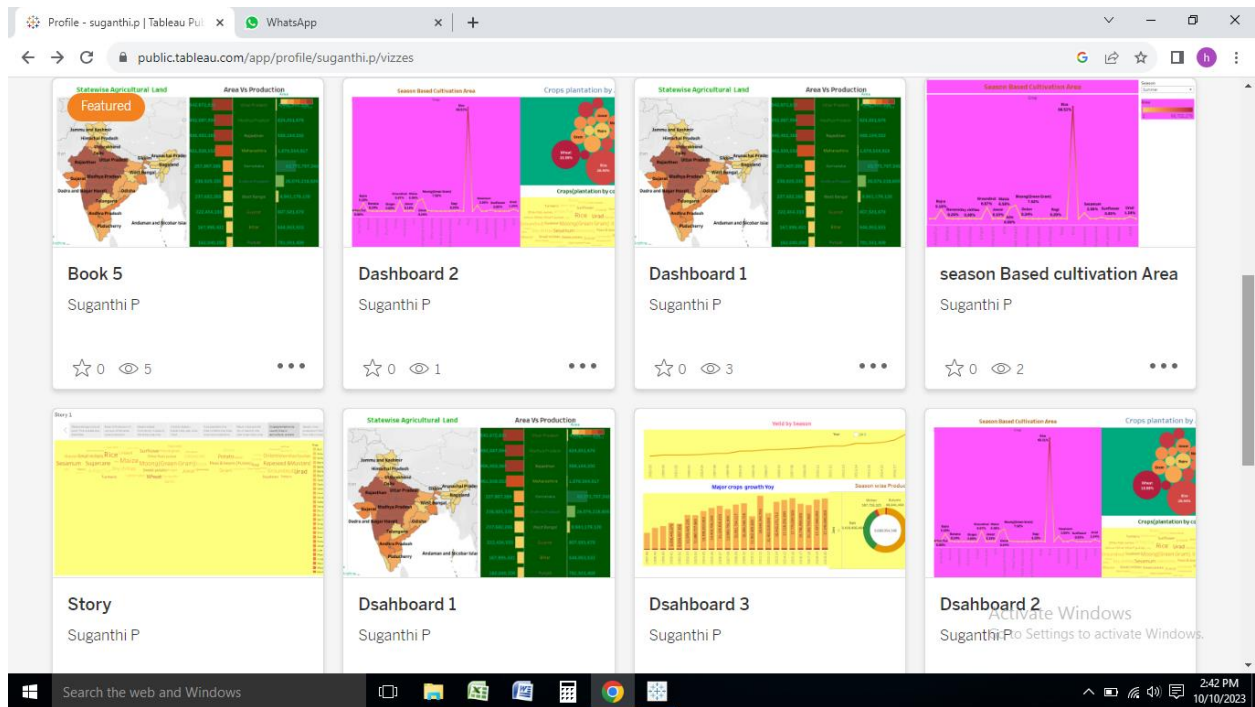












## 4 ADVANTAGES & DISADVANTAGES

### 4.1 ADVANTAGES

(1) Contribute to improving the sharing of agricultural information resources, thereby increasing agricultural productivity and promoting the healthy and stable development of the agricultural industry.

(2) It is helpful to strengthen the communication between different agricultural regions, promote agricultural production to industrialization, and the development of production standardization, and enhance the competitiveness of the agricultural economy.

(3) It is helpful to promote the development of agricultural economy in multiple directions and transform the traditional agricultural economic management mode.

It is helpful for farmers to quickly and comprehensively understand the dynamic information of the agricultural market, thereby adjusting the agricultural structure, producing agricultural products with large market demand, obtaining higher economic benefits, and promoting rural economic development, and realizing agricultural product marketing information management in agriculture. The application in the economy plays an important role in promoting the development of agriculture in our country.

(4) Agriculture impacts society in many ways, including: supporting livelihoods through food, habitat, and jobs; providing raw materials for food and other products; and building strong economies through trade.

(5) Agriculture is the foundation of India's livelihood civilisation, culture and heritage with a population of 1.39 billion, India is the second most populous country in world and is expected to overtake China as the most populated by 2027-30 with 328 million hectares (Mha) of land, India is the world's seventh largest country. India has ~160 Mha of arable land, the second largest after the US.

## 4.2 DISADVANTAGES

### (1) Lack of professional and technical personnel

Because the application of information technology to design agriculture is relatively late and the application time is relatively short, there is a shortage of professional information technology talents in agricultural economic management. In addition, the construction of information networks for some rural public utilities is not perfect, causing farmers to be unable to obtain corresponding information in a timely manner and hindering the development of rural economic management.

### (2) Lack of a perfect platform

Most local government departments do not have a high level of understanding of agricultural modernization. Under the background of the information age, the development of agricultural economy needs to rely on strong support from government departments. Only when the government correctly analyzes the conditions of the agricultural economic market can it guide the rapid agricultural economy stable development.

### (3) Farmers' informatization awareness is weak

Some relatively backward areas are not deep enough in agricultural management concepts, agricultural economic development and information management to effectively guide local farmers in construction. This problem has seriously hindered the process of agricultural economic construction and information management.

(4) Erosion 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.

(5) **Expensive products** : One of the major problems of organic farming methods is that sometimes it can get a bit costly. Some products related to organic farming are too expensive, leading to some common people to not be able to afford it. In a country like India where most of its livelihood are farmers, organic farming brings a huge problem to it. However, organic farming in Tamil Nadu have had some success stories.

## **5 APPLICATION**

### **5.1 Animal nutrition**

Many of tata Chemicals' products, such as Alkakarb, are ideally suited for poultry feed and diet for dairy animals, as they enhance the nutritional value of the feed.

### **5.2 chemicals**

Tata chemical's products are utilised as essential raw materials in a wide ranger of chemical industries and processes.

### **5.3 constructions**

Tata chemicals supplies high quality, premium grade cement to the building industry, under the brand name Shudh cement.

### **5.4 Food and nutrition**

We have a big presence in several segments of the food industry -table salts, dals and pulses, masalas ad spices, nutritional solutions, and so on.

### **5.5 Glass**

Our soda ash meets the stringent quality requirements of the glass industry. Tata chemicals also offers customised products for specific requirements. Etc.....,



## 6 CONCLUSION

The Indian economy is an agro-economy and depends highly on the agriculture sector. Despite just supporting the Indian Economy, the agricultural sector also supports the industrial sector and international trade in imports and exports.

Agricultural Economics is a branch of economics that helps to use optimise the use of resources that are bottlenecks or scarce to increase the efficiency and effectiveness of production processes. Nowadays, agriculture is not just limited to planting seeds and harvesting crops.

## 7 FUNDITURE SCOPE

Agriculture is the backbone of India's economy. It is the principal livelihood for over 58% of the rural households. But it faces difficult challenges from sowing to harvest. Hence modernization of agriculture is most needed to address these challenges. In agriculture there is a quick adaptation to AI in its various farming techniques where Artificial Intelligence (AI) is one of the key areas of research in computer science with its rapid technological advancement and vast area of application, AI is becoming relevant very rapidly because of its robust applicability in the problems particularly that cannot be solved well by humans. Such an area of extreme importance is agriculture where about 80% of the population is directly engaged on 159.7 million hectares of agricultural land. Such a venture cannot run smoothly. Hence farming solutions which are AI powered enable a farmer to do more with less, enhancing the quality, also providing a quick GTM (go-to-market strategy) strategy for crops. A direct application of AI (Artificial Intelligence) or machine intelligence across the farming sector could act to be an apotheosis of shifting of traditional farming practice today. AI powered agriculture, analysing its service in interpreting, acquiring and reacting to different situations to enhance efficiency.

Artificial intelligence technology is supporting different sectors in agriculture to boost productivity and efficiency. AI solutions are assisting to overcome the traditional challenges in every field. Intervening of AI in agriculture is helping farmers to improve their farming efficiency and reduce environmental hostile impacts. The agriculture industry strongly and openly grasped AI into their practice to change the overall outcome. AI is shifting the way of food production where the agricultural sector's emissions have decreased by



20%. Inculcating AI technology in agriculture is helping to control and manage any uninvited natural condition.