1.Introduction

1.1 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.

What are the benefits of agriculture projects?

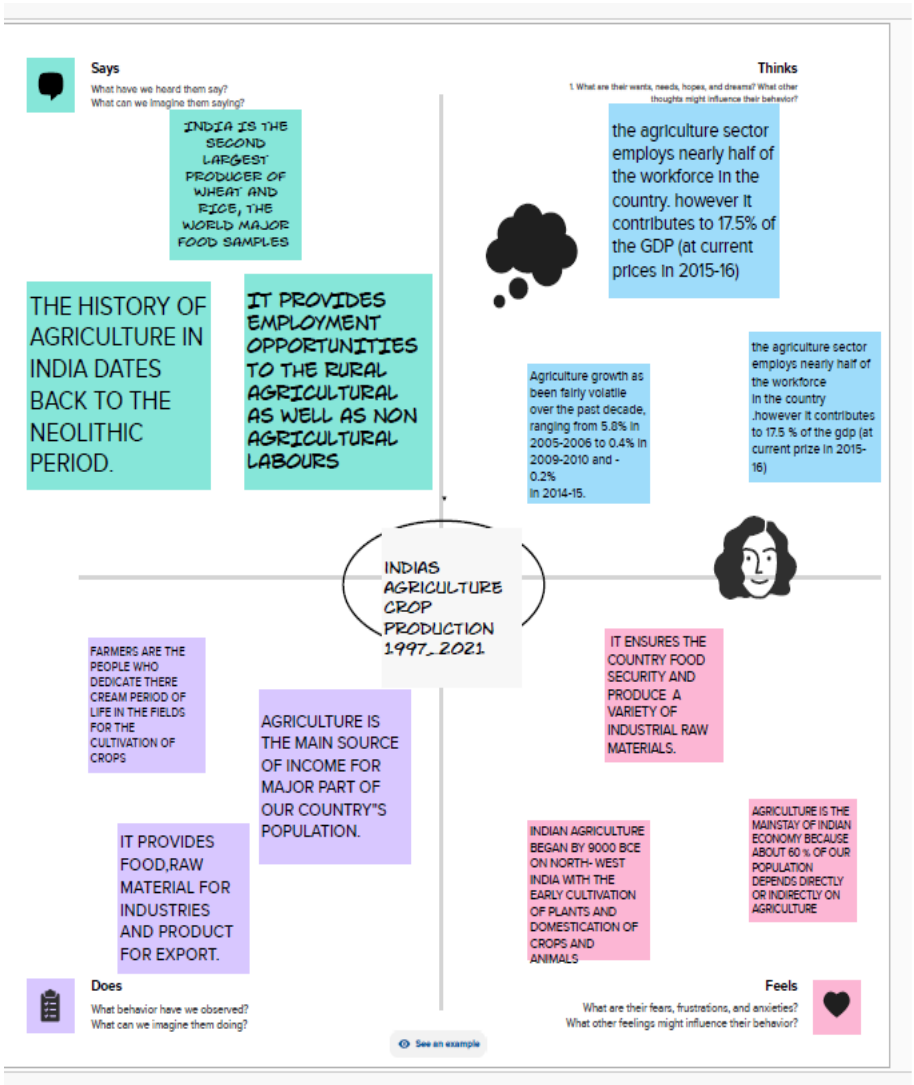
Through sustainable agricultural practices, farmers and ranchers help ensure the profitability of their land while improving soil fertility, helping promote sound environmental practices, and minimizing environmental impacts through climate action

1.2 Purpose The use of this project. What can be achieved using this.

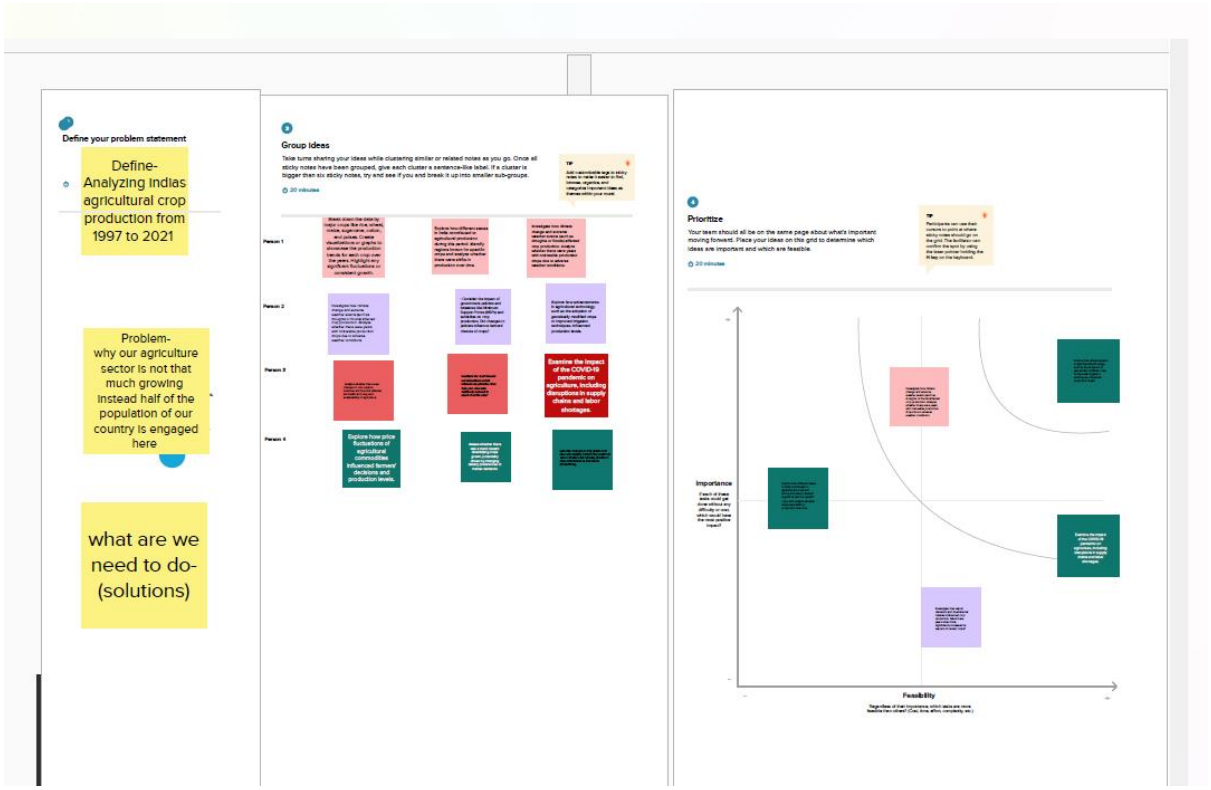
As we all know that in India more than 80 percent of the population is here and there involved in Agriculture if we are analysing the data or the statistics of agriculture crop production we can Improve the crop quality and also the life of farmers who are dedicating there everything for there Farming. In our Indian culture farmers are considered as anndevata("God Who Used To Give Food") When we are doing these studies we can improve the quality of our crops as well as their Production, Export.

1.3 Problem Definition & Design Thinking

Empathy Map:

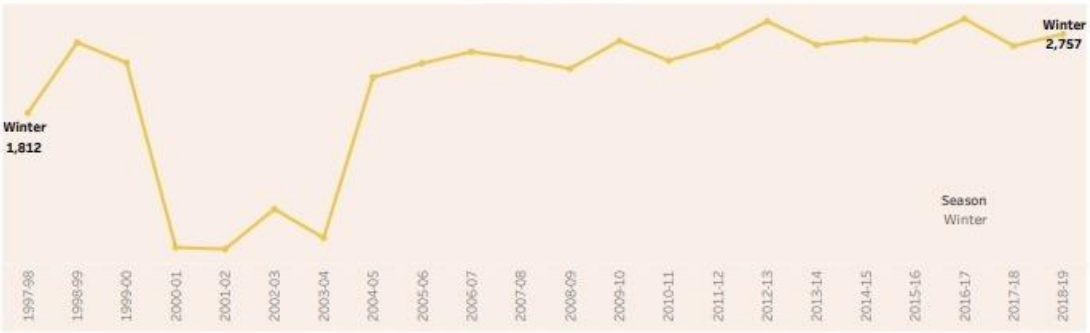


2.2 Ideation & Brainstorming Map2.2



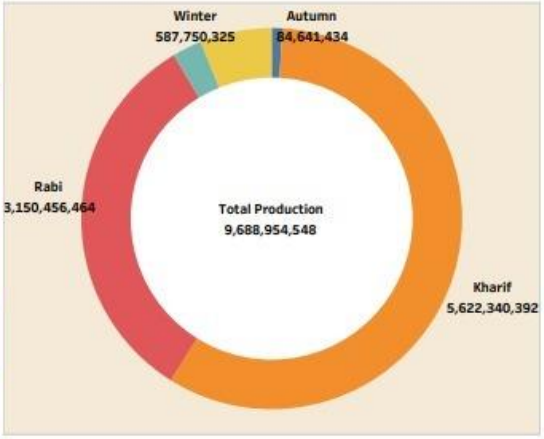
Tableu screenshots

Yield By Season



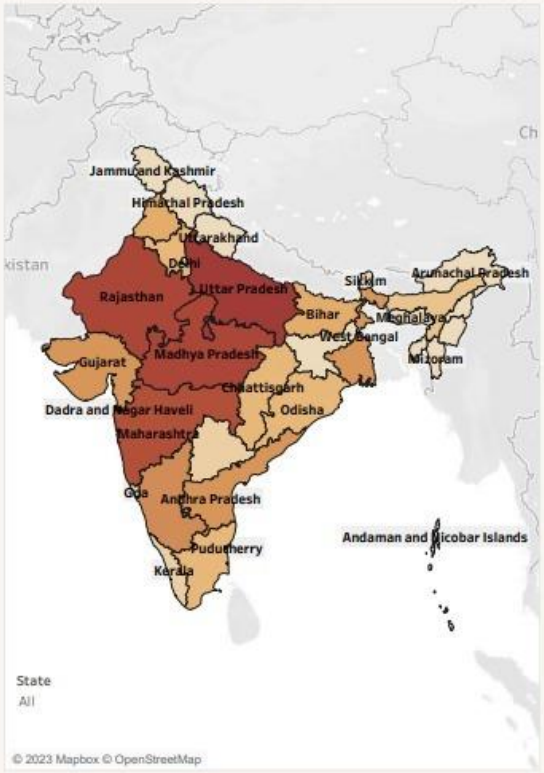
Major Crops

Season Wise Production

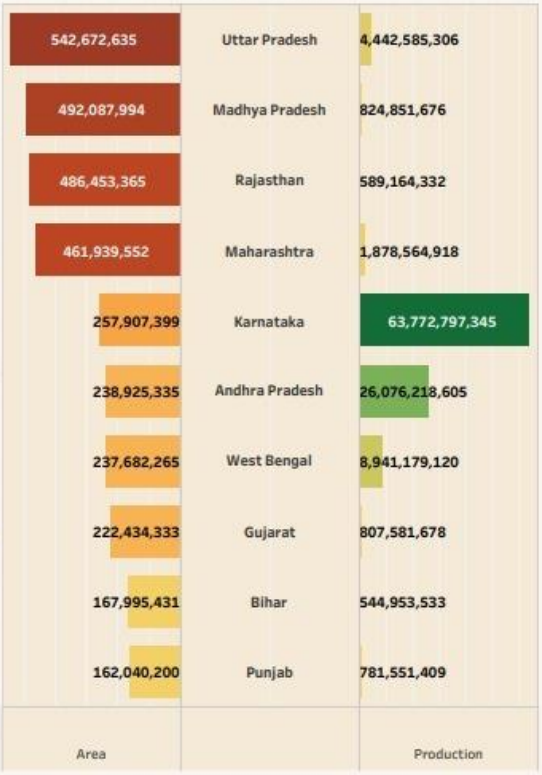


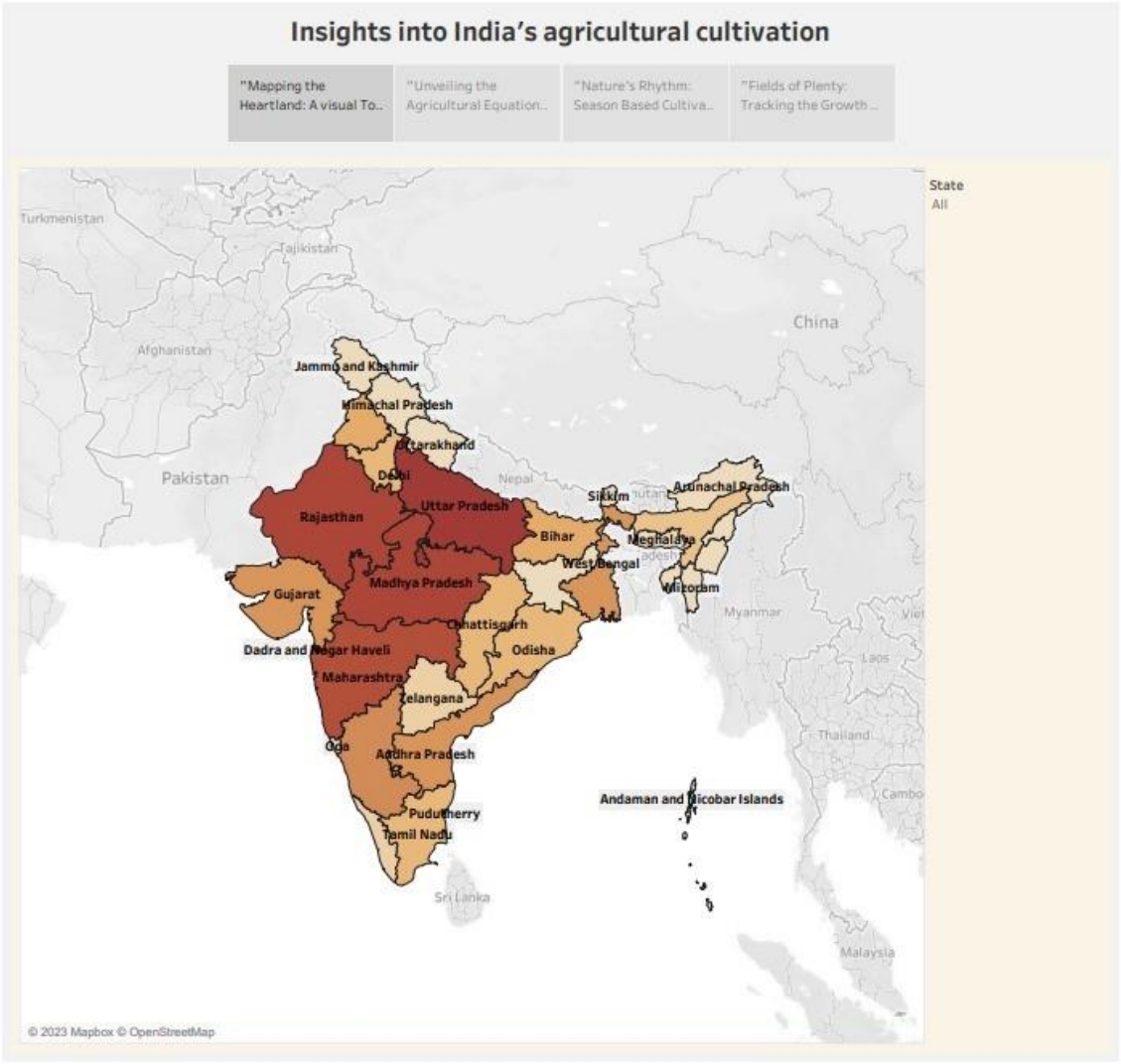
Area in acres region wise

Statewise Agricultural Land



Area Vs Production





4. Advantages of Crop Production:

Food Security: Crop production is essential for feeding the growing global population. It provides a stable source of food, ensuring food security for many communities and nations.

1. **Economic Benefits:** Crop production can be a significant source of income for farmers and contributes to the economy through the sale of crops are related products.
2. **Diversification:** Farmers can choose from a wide variety of crops, allowing for diversification of their agricultural activities and reducing the risk associated with relying on a single crop.

3. **Nutrient Cycling:** Certain crops, like legumes, help improve soil fertility by fixing nitrogen in the soil, which benefits subsequent crops in rotation.
4. **Crop Rotation:** Crop rotation practices can help control pests and diseases, reduce soil erosion, and maintain soil health.
5. **Innovation:** Advances in crop science and technology have led to increased crop yields, improved crop varieties, and more efficient farming practices.
6. **Biofuel Production:** Some crops, such as corn and sugarcane, can be used for biofuel production, which can reduce reliance on fossil fuels.
7. **Medicinal Plants:** Crop production can include the cultivation of medicinal plants, contributing to the pharmaceutical industry.

Disadvantages of Crop Production:

1. **Environmental Impact:** Intensive crop production can have adverse environmental effects, including deforestation, habitat destruction, water pollution, and soil degradation.
2. **Monoculture:** Repeatedly growing the same crop in the same field (monoculture) can lead to soil nutrient depletion, increased susceptibility to pests and diseases, and reduced biodiversity.
3. **Pesticide and Herbicide Use:** The heavy use of pesticides and herbicides in conventional crop production can harm beneficial insects, water quality, and human health.
4. **Water Usage:** Many crops require significant amounts of water for irrigation, which can strain water resources, especially in arid regions.
5. **Loss of Genetic Diversity:** The focus on a few high-yield crop varieties can lead to a loss of genetic diversity, making crops more vulnerable to pests and changing environmental conditions.
6. **Land Conversion:** Expanding crop production often involves converting natural habitats and forests into agricultural land, which can lead to habitat loss and biodiversity decline.
7. **Market Vulnerability:** Farmers can be vulnerable to fluctuations in crop prices, market demand, and climate conditions, leading to economic instability.
8. **Health Concerns:** The use of chemical fertilizers, pesticides, and herbicides in crop production can have negative health effects on farmworkers and consumers if not used properly.
9. **Soil Erosion:** Intensive crop cultivation practices can contribute to soil erosion, leading to the degradation of crops
10. Climate change: Agriculture, including crop production, is both affected by and contributes to climate change through greenhouse gas emissions, land-use changes, and deforestation.

5. APPLICATION

Well this solution can be applied in various diaspora of fields ranging from Automobile to AI

From Ai to aerospace

For example:
1): DEMERITS OF PETROL,DIESEL VEHICLES: We all know the havoc of air pollution in our country by applying this model we can made a report deaths due to air pollution from 1990 to 2022(“EXACTLY SIMILAR TO WHICH WE DID IN INDIA”S AGRICULTURE PRODUCTION FROM 1990 TILL TODAY”)

2);RISE OF LOW COST AIRLINES: We all know the rise of low cost airlines are in boom nowadays in India with latest player in the market “akasa airlines” we know that travelling in air 10 years back was the big affair reason being due to skyrocketing prize but on 2015 prime minister Narender Modi

launches the scheme called “udaan” by this any body can fly to those 747 boing airbus aircrafts by paying meagre prize we can make report about rise of low cost airways like we did in agriculture.

3): RISE OF AI OR THE FALL OF HUMAN MAN POWER: We all know the launch of CHAT GPT on November 2022 by an American software company called OPEN AI this manufacturing is a threat to the mankind because the moment it is launched it took 2000 employes jobs at it industry who are somewhere associated with calling and consultancy now the big question is whether chat gpt can take our job or not? We can make an report for this and make respective empathy maps, design thinking models as require…which we did in Agriculture.

6.FUTURE SCOPE

We can tackle any problem which is being put by us in the future by using this empathy map and design thinking technique.