INDIA'S AGRICULTURAL CROP PRODUCTION

INTRODUCTION

Agriculture has been the backbone of the Indian economy and it will continue to remain so for a long time. It has to support almost 17 per cent of world population from 2.3 per cent of world geographical area and 4.2 per cent of world's water resources. The economic reforms, initiated in the country during the early 1990s, have put the economy on a higher growth trajectory. Annual growth rate in GDP has accelerated from below 6 percent during the initial years of reforms to more than 8 percent in recent years. This happened mainly due to rapid growth in non-agriculture sector. The workforce engaged in agriculture between 1980-81 and 2006-07 witnessed a very small decline; from 60.5 percent to 52 percent.

1.1 Overview

India is currently the world's second largest producer of several based textile rawmaterials, roots and tuber crops fish, eggs, coconut, sugarcane and numerous vegetables. India is ranked under the world's five largest producers of over 80% of agricultural produce items, including many cash crops such as coffee and cotton, in 2010. India is one of the world's five largest producers of livestock and poultry meat, with one of the fastest growth rates, as of 2011.One report from 2008 claimed that India's population is growing faster

than its ability to produce rice and wheat.[15] While other recent studies claim that India can easily feed its growing population, plus produce wheat and rice for global exports, if it can reduce food staple spoilage/wastage, improve its infrastructure and raise its farm productivity like those achieved by other developing countries such as Brazil and China.

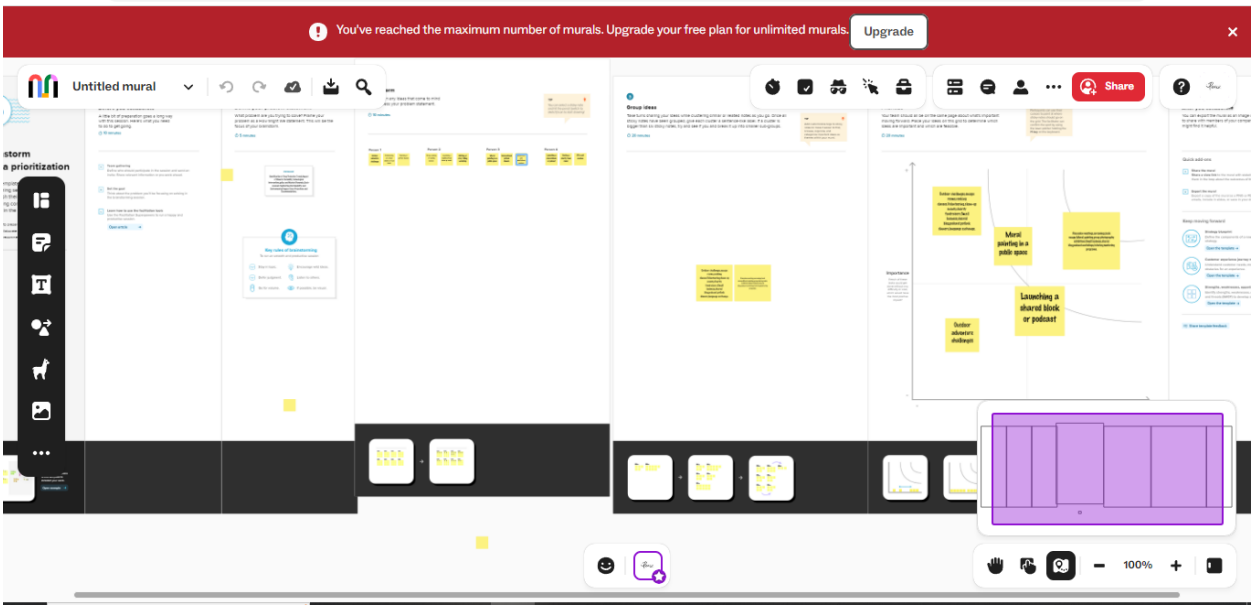
1.2 Purpose

Agriculture is one of the key contributors to the economy. It is the backbone of the country.It is the primary activity of the nation.It provides employment opportunity to the rural agricultural as well as non-agricultural labourers.It is the source of food and fodder.It also plays an important role in international business in import and export activities. 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.

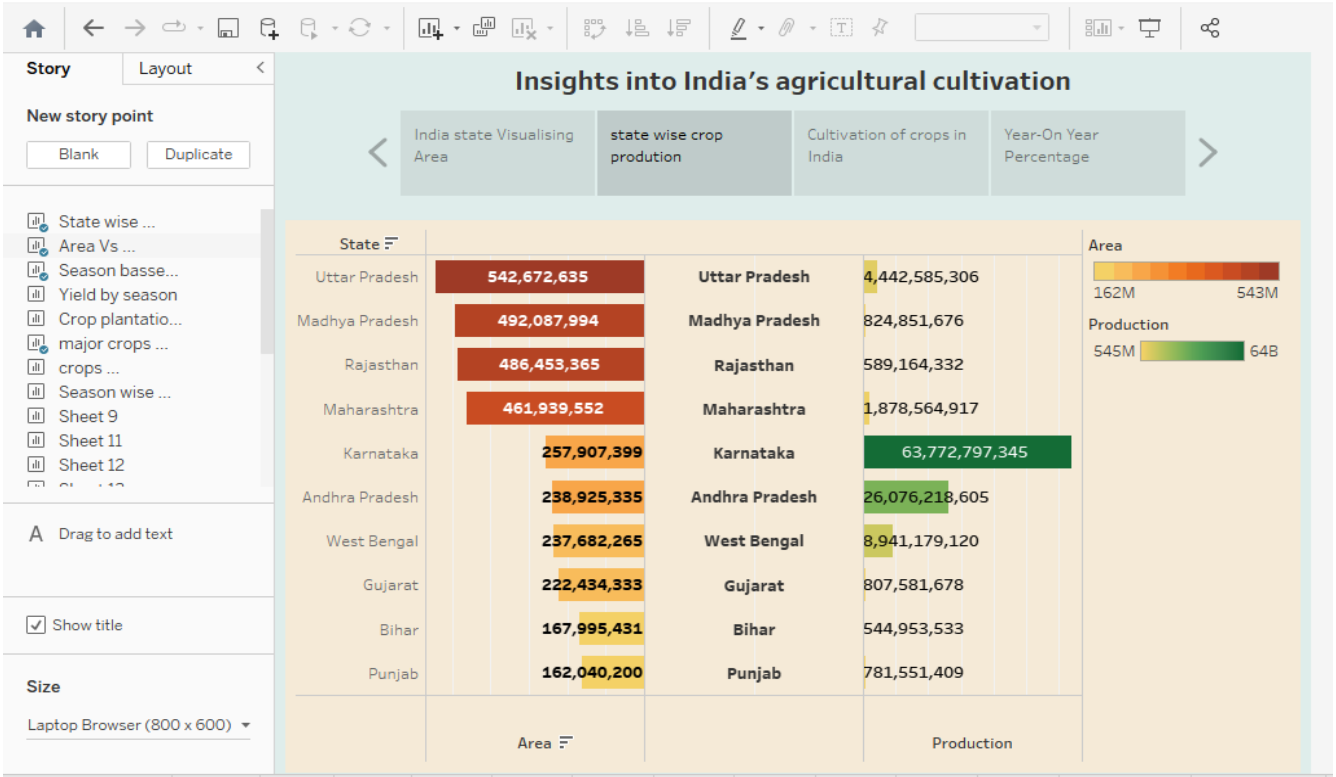
PROBLEM DEFINITIONS &DESIGN THINKING

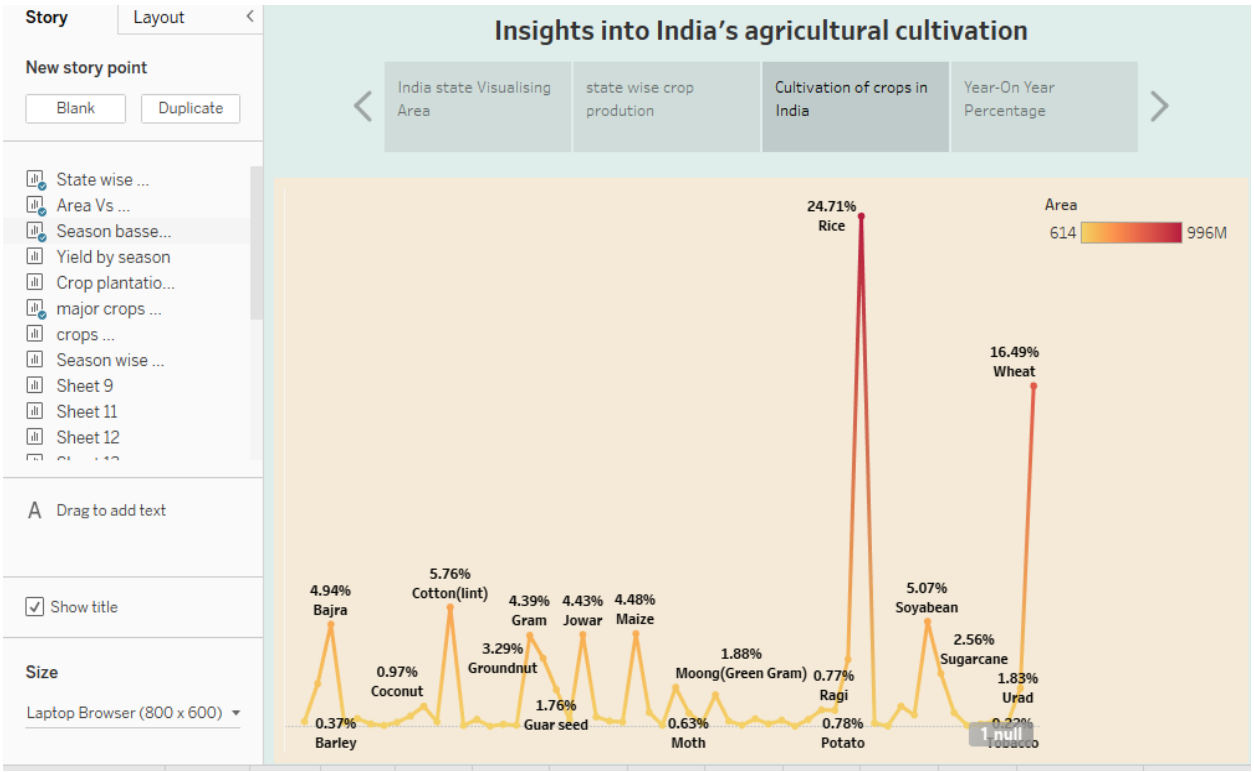
2.1 Empathy Map

Ideation & Brainstorming Map



3.RESULT


Story
Layout
New story point
Blank
Duplicate
State wise ...
Area Vs ...
Season basse...
Yield by season
Crop plantatio...
major crops ...
crops ...
Season wise ...
Sheet 9
Sheet 11
Sheet 12
Drag to add text
Show title
Size
Laptop Browser (800 x 600)
Insights into India's agricultural cultivation
India state Visualising Area
state wise crop prodution
Cultivation of crops in India
Year-On Year Percentage
State
Uttar Pradesh 542,672,635
Madhya Pradesh 492,087,994
Rajasthan 486,453,365
Maharashtra 461,939,552
Karnataka 257,907,399
Andhra Pradesh 238,925,335
West Bengal 237,682,265
Gujarat 222,434,333
Bihar 167,995,431
Punjab 162,040,200
Area
Uttar Pradesh 4,442,585,306
Madhya Pradesh 824,851,676
Rajasthan 589,164,332
Maharashtra 1,878,564,917
Karnataka 63,772,797,345
Andhra Pradesh 26,076,218,605
West Bengal 8,941,179,120
Gujarat 807,581,678
Bihar 544,953,533
Punjab 781,551,409
Area
Production
Area
162M
543M
Production
545M
64B


Story
Layout
New story point
Blank
Duplicate
State wise ...
Area Vs ...
Season basse...
Yield by season
Crop plantatio...
major crops ...
crops ...
Season wise ...
Sheet 9
Sheet 11
Sheet 12
Drag to add text
Show title
Size
Laptop Browser (800 x 600)
Insights into India's agricultural cultivation
India state Visualising Area
state wise crop prodution
Cultivation of crops in India
Year-On Year Percentage
Area
614
996M
24.71% Rice
16.49% Wheat
5.07% Soyabean
2.56% Sugarcane
1.83% Urad
5.76% Cotton(lint)
4.94% Bajra
4.39% Gram
4.43% Jowar
4.48% Maize
3.29% Groundnut
1.88% Moong(Green Gram)
0.97% Coconut
0.77% Ragi
1.76% Guar seed
0.37% Barley
0.63% Moth
0.78% Potato
1 null

ADVANTAGES & DISADVANTAGES

Biodiversity: India is known for its rich biodiversity, which allows for a wide range of crops to be grown. It has diverse climate zones, soil types, and terrain, which supports the cultivation of various crops, including rice, wheat, pulses, vegetables, spices, and fruits.

Large-scale Production: India has a vast agricultural land and a large farming population, enabling it to produce a significant quantity of crops. This enables food security and supply for the country's huge population.

Export Potential: India is among the largest exporters of agricultural products, with a significant share in global markets. It exports commodities like rice, wheat, spices, tea, coffee, and more, providing an excellent opportunity for generating foreign exchange.

Employment Generation: Agriculture is a labor-intensive sector, and a substantial portion of India's population depends on it for their livelihood. Crop production offers employment opportunities to rural communities, reducing unemployment and poverty rates.

Sustainable Farming Practices: Traditional Indian farming practices like organic farming, natural pest control, and crop rotation are gaining prominence due to their sustainable nature. These practices minimize the use of chemical inputs, promote soil health, and reduce environmental harm.

Disadvantages

Dependence Monsoons: India's crop production heavily relies on the monsoon rains, which are seasonal and unpredictable. Insufficient or delayed rainfall can lead to drought conditions, affecting crop yields and farmer incomes.

Outdated Infrastructure: The lack of modern infrastructure, including irrigation facilities, storage, transportation, and market linkages, hampers the efficiency of crop production and distribution. It increases post-harvest losses and affects the overall profitability of farmers.

Water Scarcity and Pollution: India faces water scarcity issues, particularly in certain regions, due to unsustainable water use practices in agriculture. Moreover, excessive use of chemical fertilizers and pesticides can lead to water pollution, affecting both human health and ecosystems.

Climate Change Vulnerability: India's agricultural sector is highly vulnerable to the impacts of climate change, such as erratic weather patterns, heatwaves, and increased pest attacks. These factors disrupt crop growth, reduce yields, and pose challenges to agricultural adaptation.

Application

The primary application of agricultural crop production is to meet the food requirements of India's vast population. Export and Trade: India is a major exporter of agricultural products.

Agricultural crops like rice, spices, tea, coffee, cotton, and fruits find markets both within the region and globally. Crop residues, such as wheat straw, rice straw, and maize stalks, serve as a vital source of feed for livestock. Livestock farmers use these residues to provide nourishment to their animals, including cattle, buffaloes, goats, and sheep. India's agricultural crops find applications in various agro-based industries. Crop production also serves as a source of agricultural inputs. For instance, crops like pulses and legumes fix nitrogen in the soil, improving its fertility. India is known for its diverse herbal and medicinal plants. Several agricultural crops, such as turmeric, neem, ginger, and amla, have traditional medicinal uses. These crops are utilized for their curative properties and are processed to produce herbal medicines, oils, and extracts. Some agricultural crops, including sugarcane, maize, and oilseeds, can be converted into biofuels. India promotes the use of biofuels as an alternative to conventional fossil fuels, reducing carbon emissions and dependence on imported petroleum products.

6.Conclusion

India's agricultural crop production plays a crucial role in fulfilling the food requirements of its vast population, generating employment opportunities, and contributing to the country's economy. The diverse range of crops grown in India allows for a varied diet, export opportunities, and the production of agricultural inputs, medicinal plants, and

biofuels.However, there are challenges to be addressed, including dependence on monsoons, fragmented landholdings, outdated infrastructure, water scarcity, pollution, and climate change vulnerability. Overcoming these challenges is essential for sustainable and resilient crop production in India.

By adopting modern agricultural practices, promoting sustainable farming techniques, improving infrastructure, and implementing effective water management strategies, India can enhance its agricultural crop production and ensure food security, income generation, and economic growth. Balancing the needs of farmers, environmental sustainability, and market demands will be crucial for the future success of India's agricultural sector.

Future Scope

Advancements in technology, such as precision farming techniques, drones, sensors, and satellite imagery, have the potential to revolutionize crop production. Implementing precision agriculture can optimize resource usage, enhance productivity, and reduce environmental impact. India's vulnerability to climate change, there is immense scope for adopting climate-smart agricultural practices The growing demand for organic and sustainable produce presents an opportunity for farmers to adopt organic farming practice The integration of agricultural technology (agri-tech) can lead to increased productivity and efficiency in crop production. Innovations such as smart farming applications, farm management software, automation, and data analytics

can empower farmers, streamline operations, and optimize resource usage. Enhancing the value addition and processing of agricultural crops can lead to increased profitability and reduced post-harvest losses. The future scope for India's agricultural crop production lies in adopting modern technologies, sustainable practices, and value addition. By leveraging innovation, research, and policy support, India can strengthen its agricultural sector, ensure food security, generate employment, promote rural development, and contribute to sustainable and inclusive growth.

Appendix

https://public.tableau.com/views/agriculture1_16966848352000/Dashboard2?:language=en-US&:display_count=n&:origin=viz_share_link

https://public.tableau.com/views/agriculturestory2/Story2?:language=en-US&:display_count=n&:origin=viz_share_link

https://public.tableau.com/views/agriculturestory1/Story1?:language=en-US&:display_count=n&:origin=viz_share_link

https://public.tableau.com/views/agriculture2_16966850383910/Dashboard3?:language=en-US&:display_count=n&:origin=viz_share_link

https://public.tableau.com/views/Book1_16966844150820/Dashboard2?:language=en-US&:display_count=n&:origin=viz_share_link