1. INTRODUCTION

1.1 overview

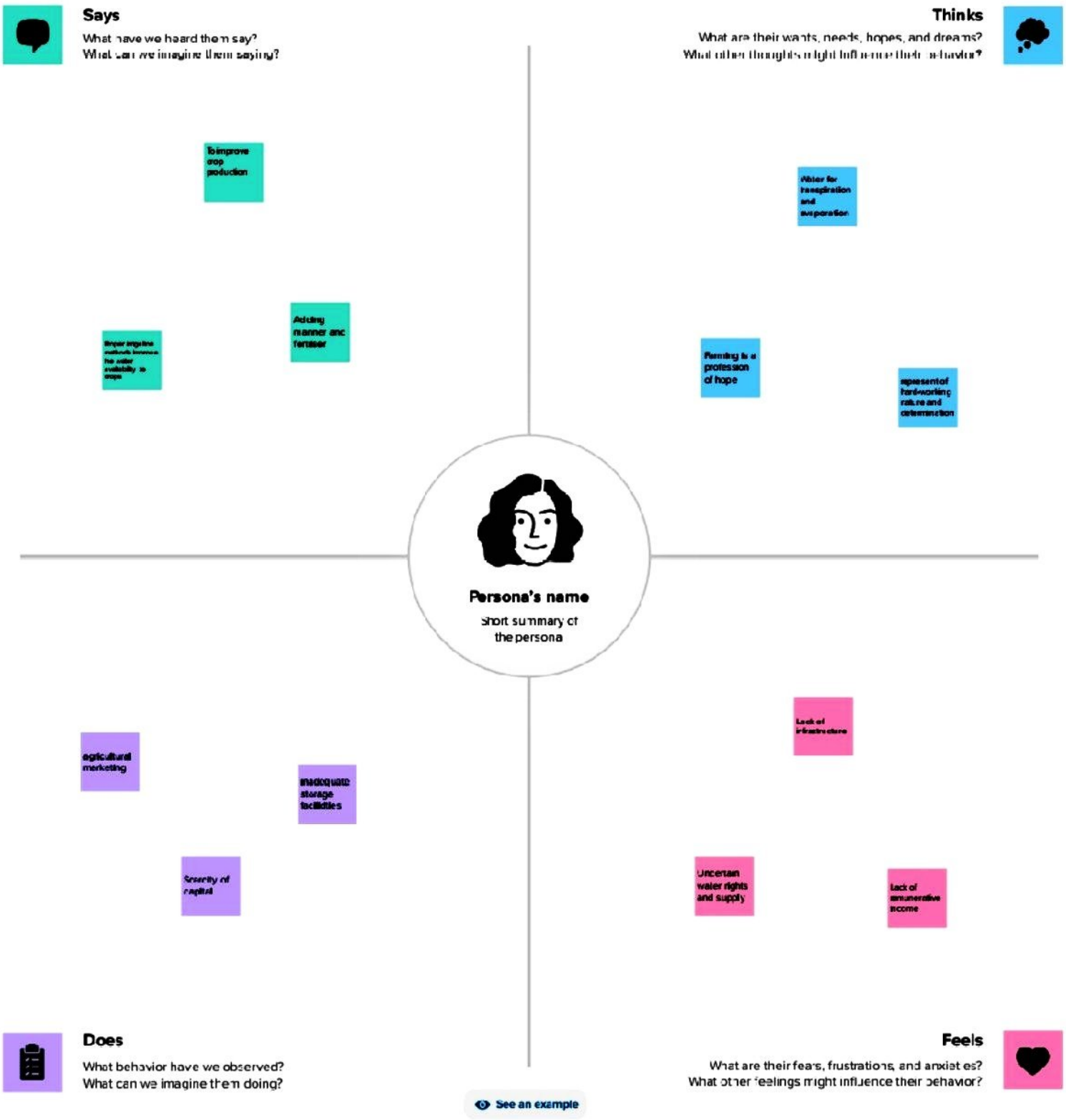
My project is about India's agriculture crop projection analysis. My project is about gathering a information about crop production. District wise crop production is used by the various types of crops like Arecanut, banana, black Peper, cashewnut, coconut, dry chillies, gunger, other kharif pulse, other oil seeds, rice, sugarcane, sweet potato. These are all produced/ formed in india. This information have in my projects.

1.2 Purpose

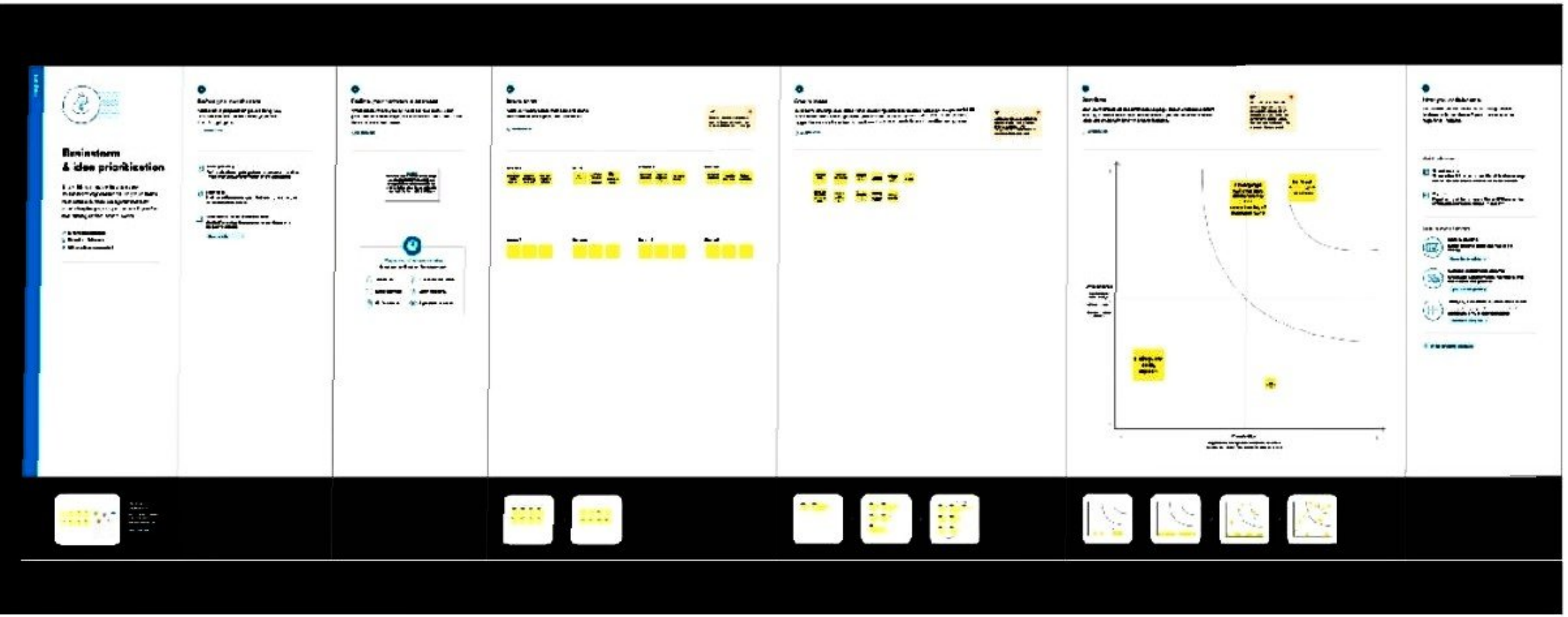
This projects develope into the captivation, provoiding a comprehensive visual exploration of key aspects and trends in the agricultural sectors.

2. PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy mapping



2.2 Ideation & Brainstorming Map I



3. RESULT

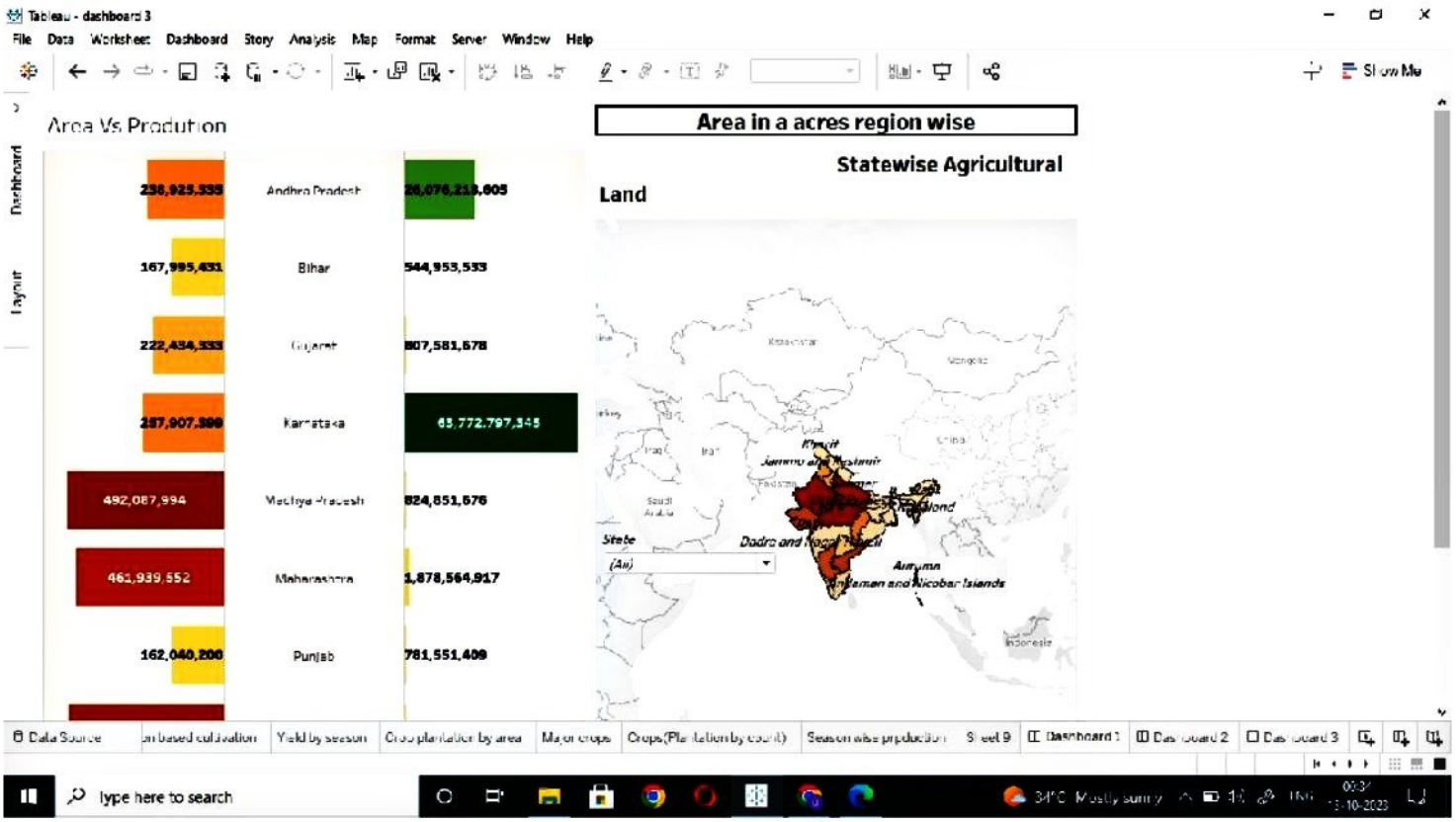


Tableau - dashboard 3
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Area Vs Prodution
Area in a acres region wise
Statewise Agricultural
Land
Andhra Pradesh
Bihar
Gujarat
Karnataka
Madhya Pradesh
Maharashtra
Punjab
236,925,333
167,995,431
222,434,333
287,907,389
492,087,994
461,939,552
162,040,200
28,076,218,605
544,955,553
807,581,578
63,772,797,345
824,851,676
1,878,564,917
781,551,409
State
(All)
Data Source
Yield by season
Major crops
Sheet 9
Dashboard 1
Dashboard 2
Dashboard 3
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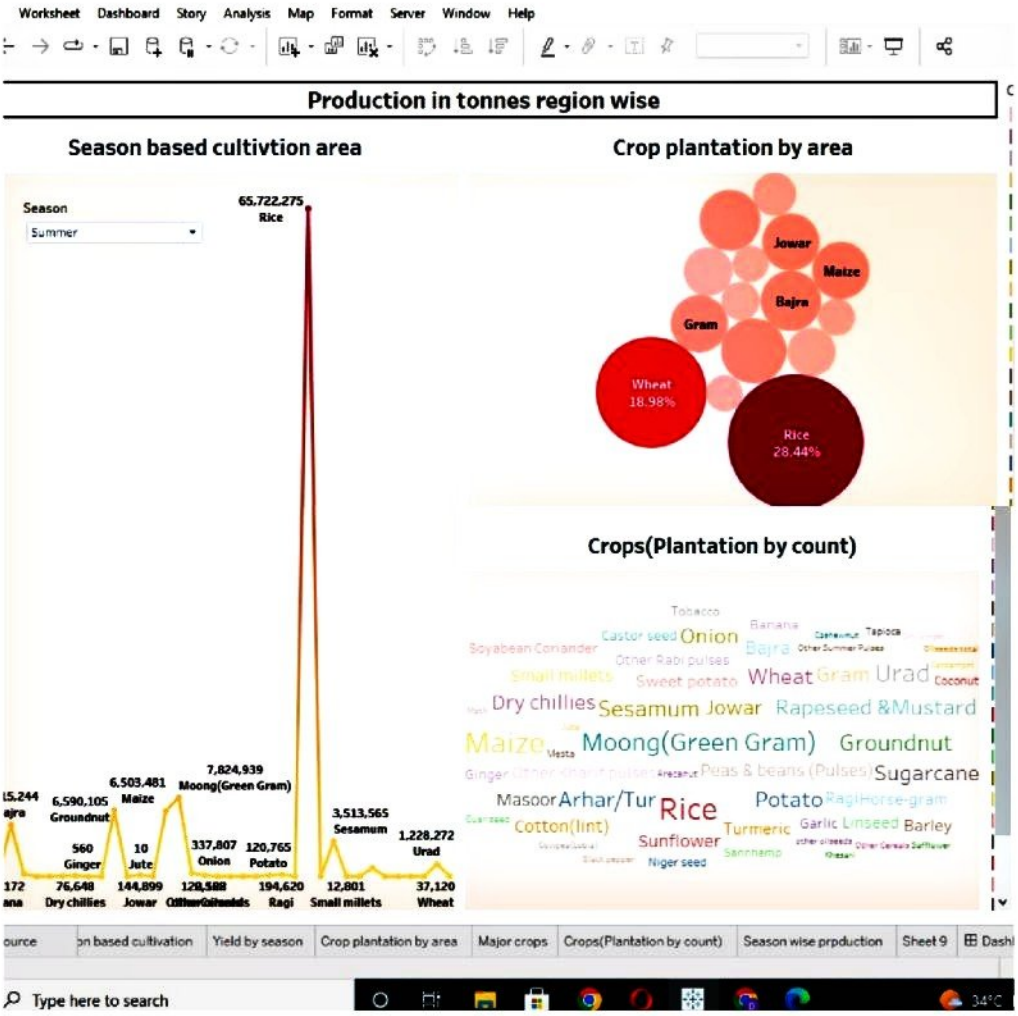
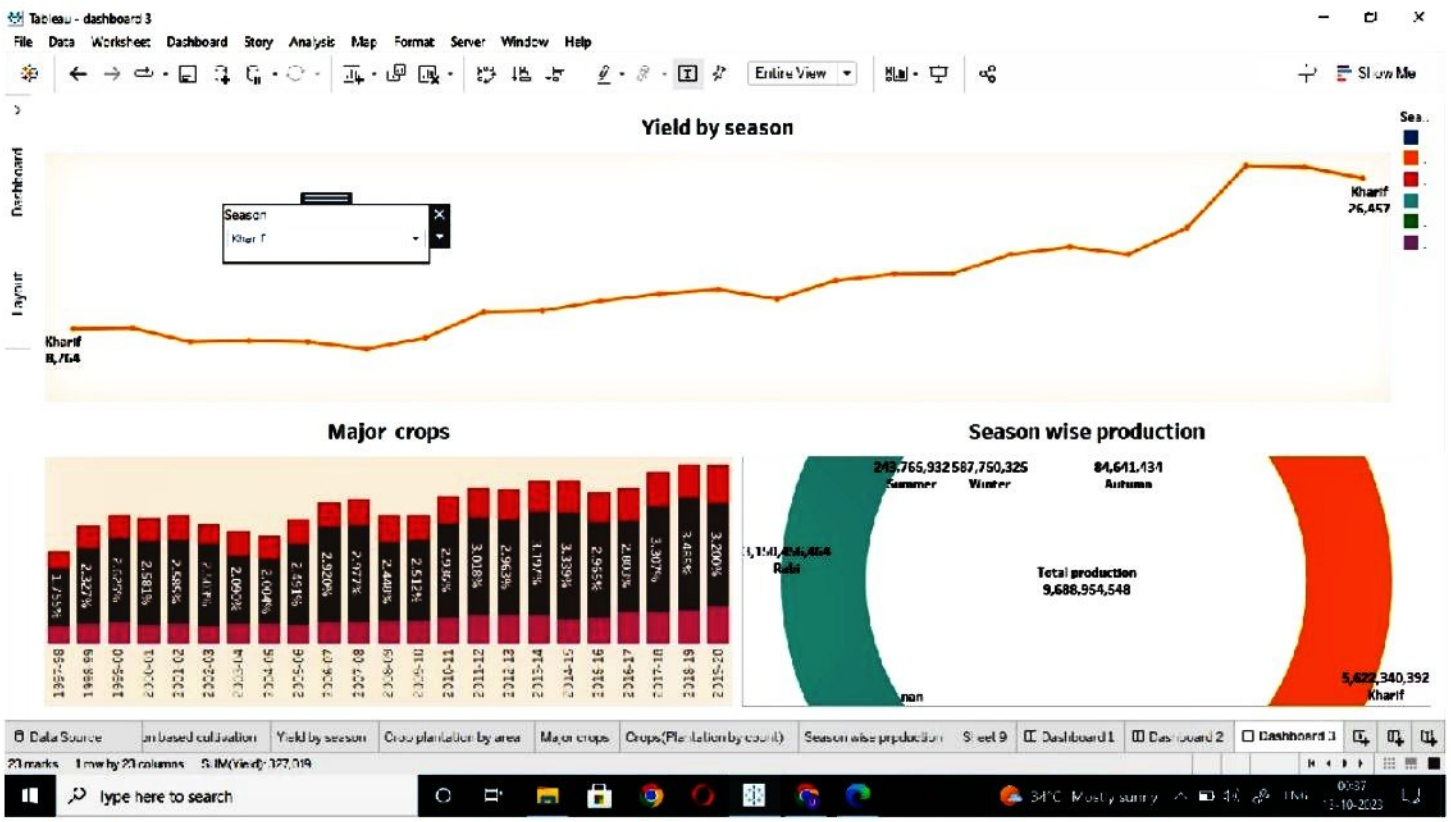

Worksheet Dashboard Story Analysis Map Format Server Window Help
Production in tonnes region wise
Season based cultivtion area
Crop plantation by area
Season
Summer
65,722,275
Rice
6,590,105
Groundnut
560
Ginger
6,503,481
Maize
10
Jute
7,824,939
Moong(Green Gram)
337,807
Onion
120,765
Potato
3,513,565
Sesamum
1,228,272
Urad
76,648
Dry chillies
144,899
Jowar
194,620
Ragi
12,801
Small millets
37,120
Wheat
Jowar
Maize
Bajra
Gram
Wheat
18.98%
Rice
28.44%
Crops(Plantation by count)
Tobacco
Banana
Castor seed
Onion
Bajra
Soyabean
Coriander
Other Rabi pulses
Small millets
Sweet potato
Wheat
Gram
Urad
Coconut
Dry chillies
Sesamum
Jowar
Rapeseed &Mustard
Maize
Moong(Green Gram)
Groundnut
Peas & beans (Pulses)
Sugarcane
Masoor
Arhar/Tur
Rice
Potato
Ragi
Horse-gram
Cotton(lint)
Sunflower
Turmeric
Garlic
Linseed
Barley
Niger seed
Sannhamp
Yield by season
Crop plantation by area
Major crops
Crops(Plantation by count)
Season wise prpduction
Sheet 9
Type here to search



4 ADVANTAGES

The project gainvaluable insights into crop production, seasonal variations, regional distribution and overall production trends.

DISADVANTAGES

Key issues affecting agricultural productivity include the decreasing size of agriculture land holdings, continued dependence on the monsoon, inadequate access to irrigation, imbalanced use of soil nutrients resulting in loss of fertility of soil, uneven access tomordern technology in different parts of the country.

5. Application:

Agriculture plays a crucial role in Indian economy. Crop yield is main component of food security as human population is increasing in a drastic way. One of the most important problems of agriculture is crop yield prediction. Agriculture yield depends on the various factors such as weather situation (rain, humidity, temperature etc.), information about pesticides. Apart from these factors exact information about the crop yield history is an essential concept for making predictions and controlling agriculture risk. Earlier yield prediction was performed by considering the farmer's experience on a particular field and crop. In this study machine learning is used to predict four popular yields which are mostly cultivated all over India. Once the crop yield is site specifically predicted, the inputs such as fertilizers could be applied variably according to the expected crop and soil needs.
In our study we use Machine Learning approaches to develop a trained model to identify the patterns among data and it is used for crop prediction. In this study the prediction of four most cultivated yields in India is considered by applying machine learning. These crops include: Maize, Potatoes, Rice (Paddy) and wheat.

6. Conclusion

Increasing population, increasing averageincome and globalisation effects in India will increase demand for quantity, quality and nutritious food, and variety of food. Therefore, pressure on decreasing available cultivable land to produce more quantity, variety and quality of food will keep on increasing.Although the constraints in agriculture make the productivity and return complex but still a high untapped potential is there in India's agriculture sector. Efforts are being made to convert all the challenges in agriculture into opportunities and this process is the future of agriculture.While predictions can shed light on the future, we are still not there. A whole new generation of growers, who are not yet born, will be farming mid-century, and much will happen between now and then that we cannot predict. But if the past and present are a clue to the future, Indian growers will continue to seek better ways to produce crops by embracing innovation. Issues such as social-equity, gender-equality, and environmental justice will remain the critical pillars of agricultural and societal progress, and India must make giant leaps in the coming years.

7 Futures scope:

In this research work different machine algorithms are used to predict crop yield in India. We have used the data set for making prediction for four primary crops such as potatoes, rice, wheat and maize. The decision tree Regressor achieves highest accuracy to predict crop yield. Out of four crops, which are mentioned above, the prediction score of potatoes is excellent. . The model's predictions can be enhanced in future by adding some more relevant features.