INDIA'S AGRICULTURAL CROP PRODUCYTION ANALYSIS (1997-2021)

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1 INTRODUCTION

1.1 OVERVIEW

As per the 2014 FAO world agriculture statistics India is the world's largest producer of many fresh fruits like banana, mango, guava, papaya, lemon and vegetables like chickpea, okra and milk, major spices like chili pepper, ginger, fibrous crops such as jute, staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, the world's major food staples.

India is currently the world's second largest producer of several dry fruits, agriculture-based textile raw materials, roots and tuber crops, pulses, farmed 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.[13] 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.

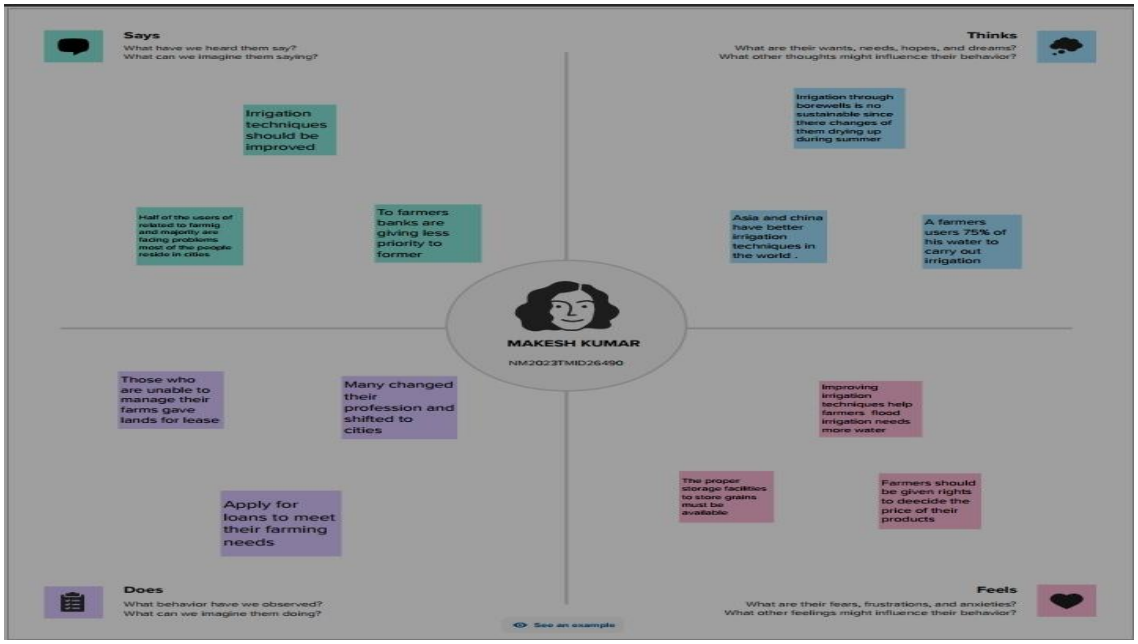
1.2 PURPOSE

Its gross irrigated crop area of 82.6 million hectares (215.6 million acres) is the largest in the world. India is among the top three global producers of many crops, including wheat, rice, pulses, cotton, peanuts, fruits and vegetables.

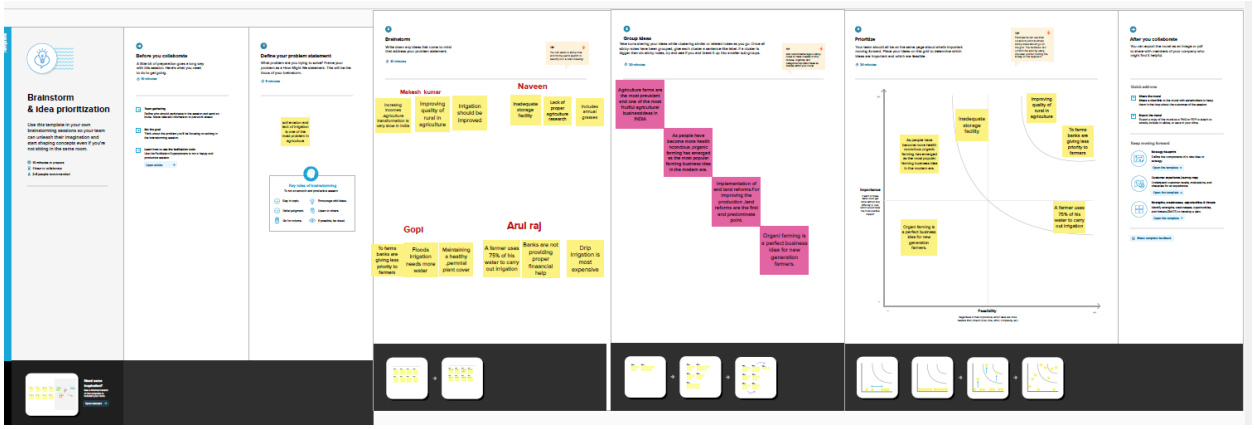
Agriculture is an evolutionary process that consists of a series of activities such as the production of food, fibers, feed, and raising of domesticated animals to fulfill the demand of the population. Agriculture is a key to development in the area of human civilization

2 PROBLEM DEFINATION & DESIGN THINKING

2.1 Empathy map

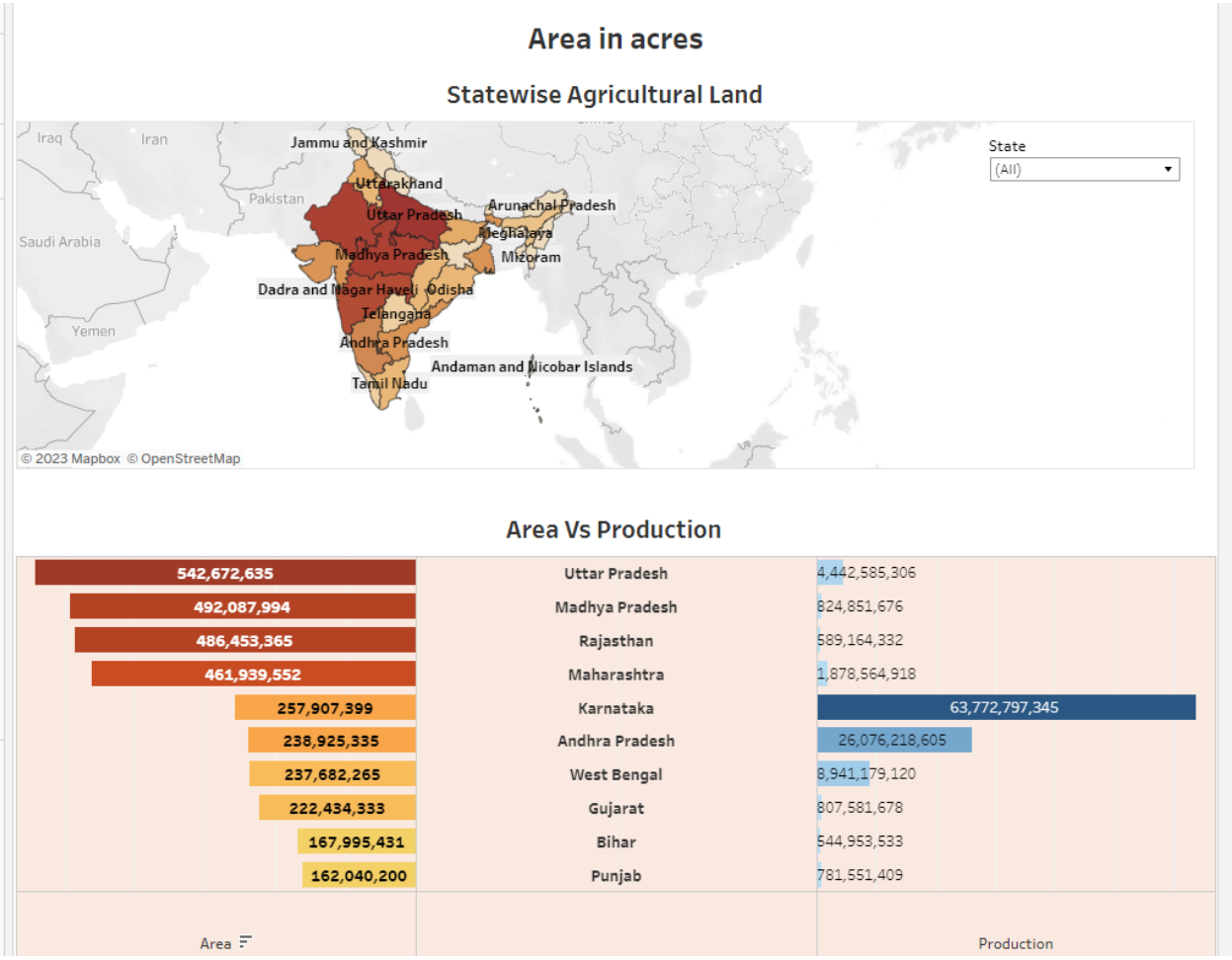


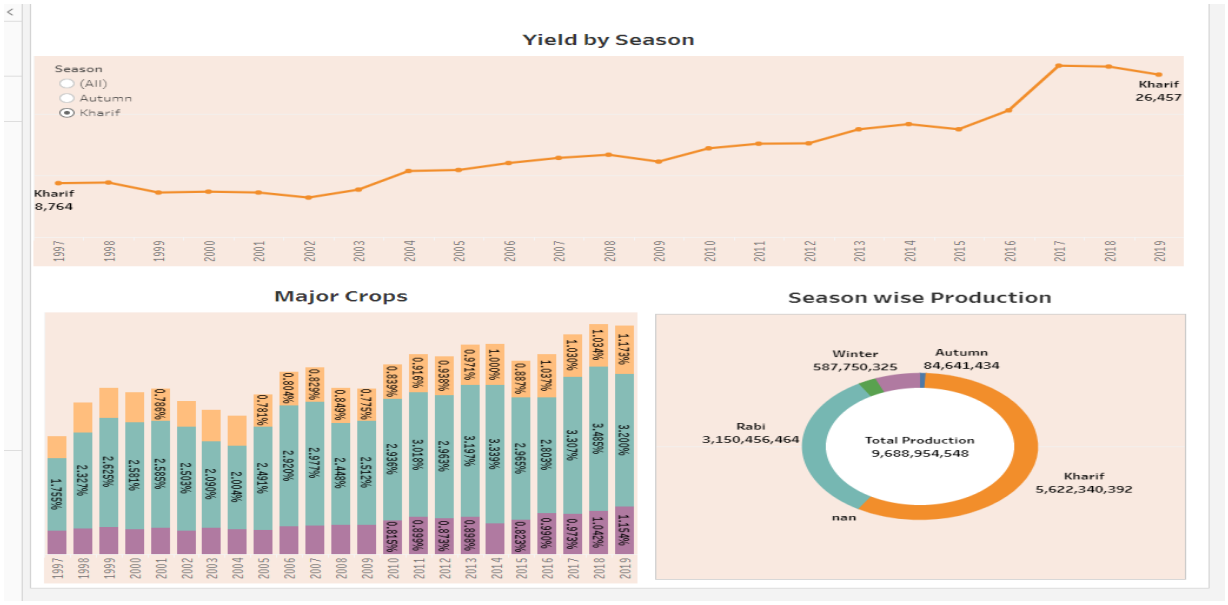
2.2 ideation &brain storming

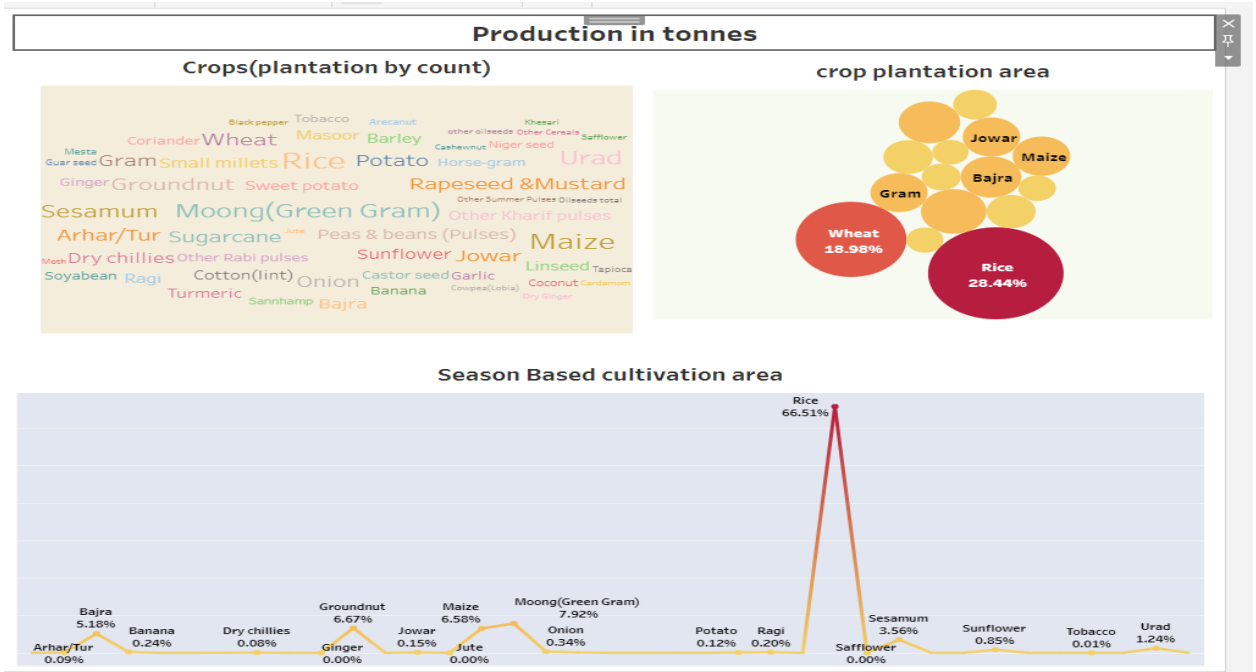


3 RESULT

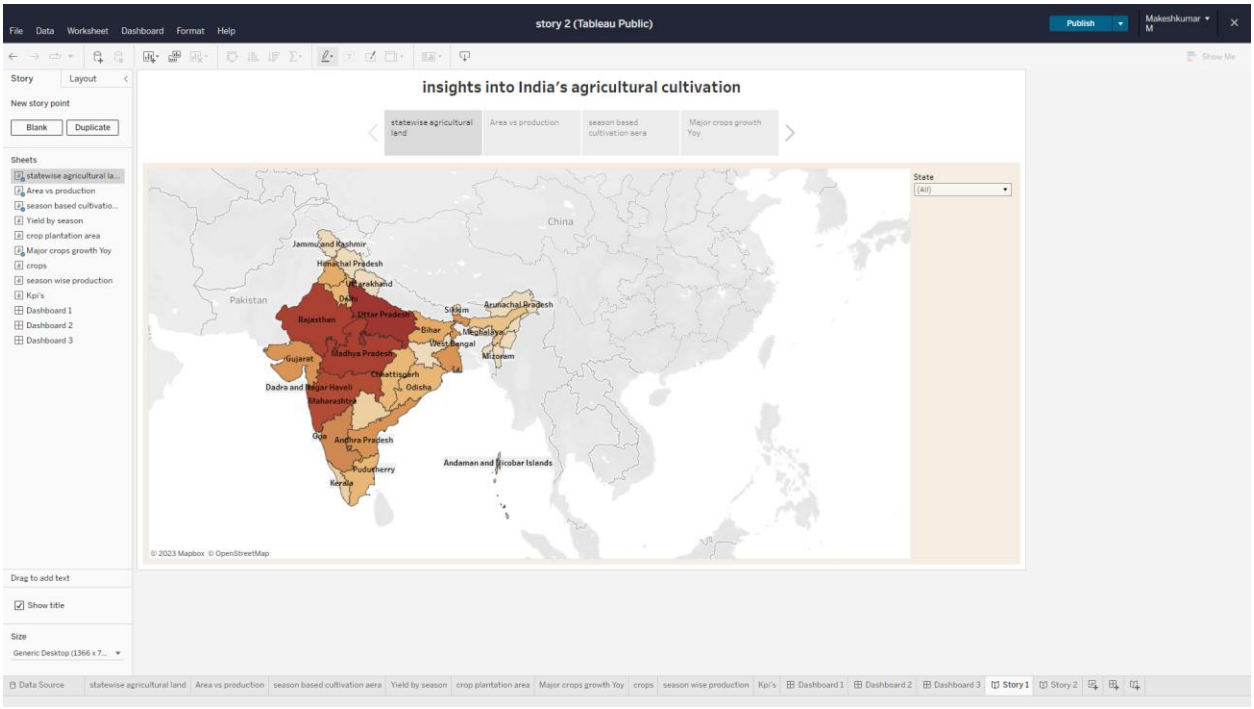
3.1 DASHBORAD




Yield by Season
Season
(All)
Autumn
Kharif
Kharif
8,764
Kharif
26,457
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Major Crops
1.759%
2.327%
2.625%
2.581%
2.595%
2.503%
2.090%
2.004%
2.491%
2.920%
2.977%
2.449%
2.512%
2.336%
3.018%
2.963%
3.197%
3.339%
2.495%
2.803%
3.307%
3.465%
3.200%
0.786%
0.781%
0.804%
0.829%
0.849%
0.779%
0.839%
0.916%
0.938%
0.971%
1.000%
0.887%
1.037%
1.030%
1.034%
1.172%
0.815%
0.899%
0.873%
0.888%
0.822%
0.990%
0.973%
1.042%
1.154%
Season wise Production
Winter
587,750,325
Autumn
84,641,434
Rabi
3,150,456,464
Total Production
9,688,954,548
Kharif
5,622,340,392
nan


Production in tonnes
Crops(plantation by count)
Black pepper
Tobacco
Arecanut
Kheseri
Coriander
Wheat
Masoor
Barley
other oilseeds
Other Cereals
Safflower
Mesta
Guar seed
Gram
Small millets
Rice
Potato
Horse-gram
Cashewnut
Niger seed
Urad
Ginger
Groundnut
Sweet potato
Rapeseed &Mustard
Other Summer Pulses
Oilseeds total
Sesamum
Moong(Green Gram)
Other Kharif pulses
Arhar/Tur
Sugarcane
Jute
Peas & beans (Pulses)
Maize
Moth
Dry chillies
Other Rabi pulses
Sunflower
Jowar
Soyabean
Ragi
Cotton(lint)
Onion
Castor seed
Garlic
Linseed
Tapioca
Coconut
Cardamom
Turmeric
Sannhamp
Bajra
Banana
Cowpea(Lobia)
Dry Ginger
crop plantation area
Jowar
Maize
Bajra
Gram
Wheat
18.98%
Rice
28.44%
Season Based cultivation area
Rice
66.51%
Bajra
5.18%
Arhar/Tur
0.09%
Banana
0.24%
Dry chillies
0.08%
Groundnut
6.67%
Ginger
0.00%
Jowar
0.15%
Maize
6.58%
Jute
0.00%
Moong(Green Gram)
7.92%
Onion
0.34%
Potato
0.12%
Ragi
0.20%
Safflower
0.00%
Sesamum
3.56%
Sunflower
0.85%
Tobacco
0.01%
Urad
1.24%

3.2 STORY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insights into India's agricultural cultivation
statewise agricultural land
Area vs production
season based cultivation aera
Major crops growth Yoy
China
Pakistan
Jammu and Kashmir
Himachal Pradesh
Uttarakhand
Delhi
Rajasthan
Uttar Pradesh
Sikkim
Arunachal Pradesh
Bihar
Meghalaya
West Bengal
Mizoram
Gujarat
Madhya Pradesh
Chhattisgarh
Dadra and Nagar Haveli
Odisha
Maharashtra
Goa
Andhra Pradesh
Puducherry
Kerala
Andaman and Nicobar Islands
State
(All)
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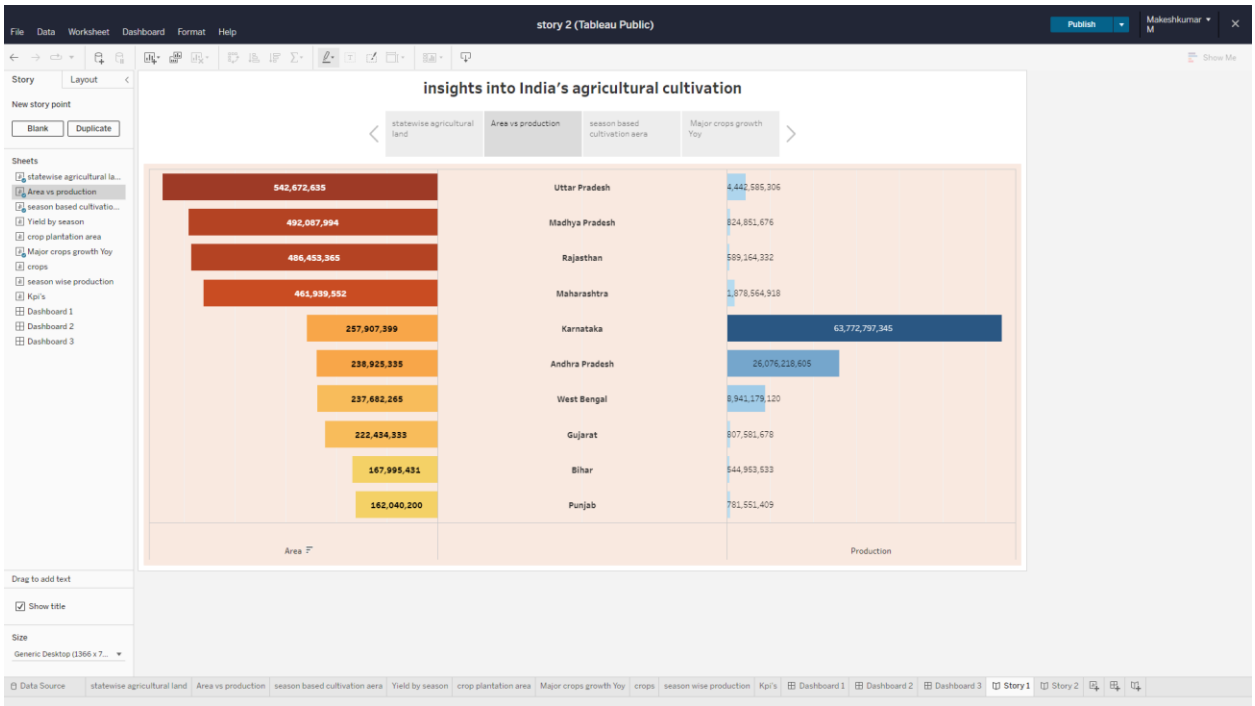
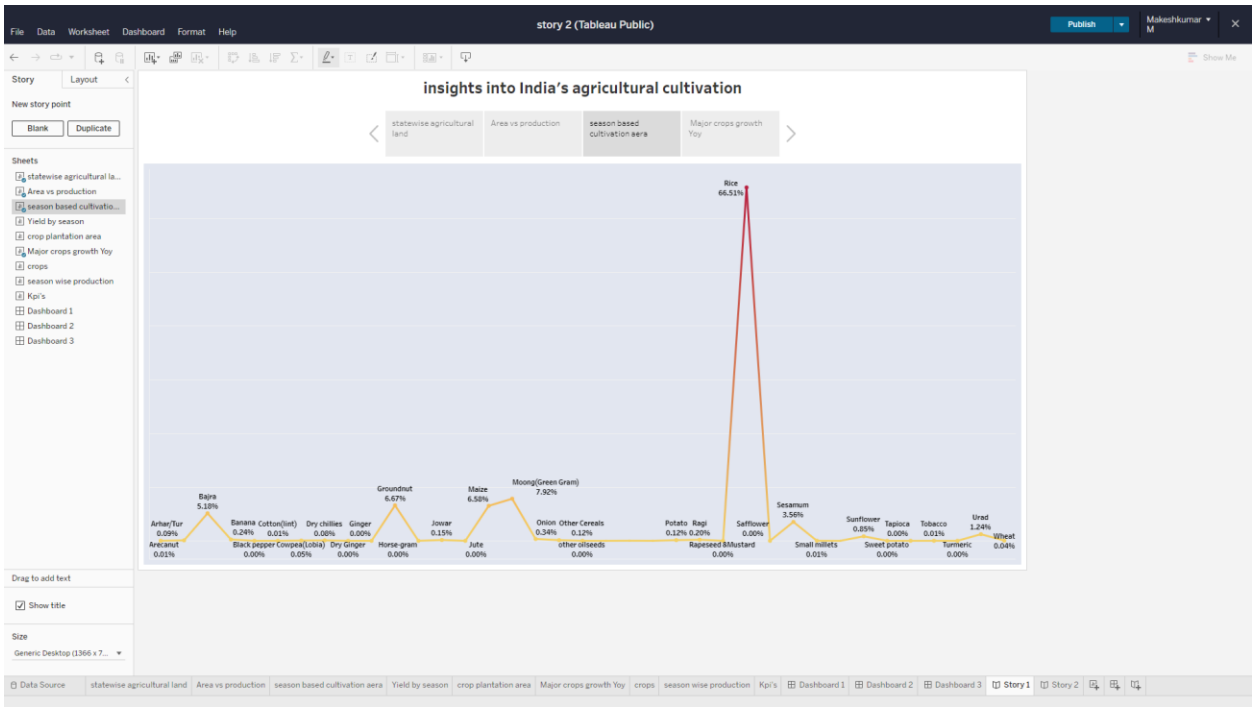

story 2 (Tableau Public)
insights into India's agricultural cultivation
statewise agricultural land
Area vs production
season based cultivation aera
Major crops growth Yoy
542,672,635
Uttar Pradesh
4,442,585,306
492,087,994
Madhya Pradesh
824,851,676
486,453,365
Rajasthan
589,164,332
461,939,552
Maharashtra
1,878,564,918
257,907,399
Karnataka
63,772,797,345
238,925,335
Andhra Pradesh
26,076,218,605
237,682,265
West Bengal
8,941,179,120
222,434,333
Gujarat
807,581,678
167,995,431
Bihar
544,953,633
162,040,200
Punjab
781,551,409
Area
Production


story 2 (Tableau Public)
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Publish
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Story Layout
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Sheets
statewise agricultural la...
Area vs production
season based cultivatio...
Yield by season
crop plantation area
Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
Dashboard 2
Dashboard 3
insights into India's agricultural cultivation
statewise agricultural land
Area vs production
season based cultivation aera
Major crops growth Yoy
Rice 66.51%
Arhar/Tur 0.09%
Bajra 5.18%
Banana 0.24%
Cotton(lint) 0.01%
Dry chillies 0.08%
Ginger 0.00%
Groundnut 6.67%
Jowar 0.15%
Maize 6.58%
Moong(Green Gram) 7.92%
Onion 0.34%
Other Cereals 0.12%
Potato 0.12%
Ragi 0.20%
Safflower 0.00%
Sesamum 3.56%
Sunflower 0.05%
Tapioca 0.00%
Tobacco 0.01%
Urad 1.24%
Arecanut 0.01%
Black pepper 0.00%
Cowpea(Lobia) 0.05%
Dry Ginger 0.00%
Horse-gram 0.00%
Jute 0.00%
other oilseeds 0.00%
Rapeseed &Mustard 0.00%
Small millets 0.01%
Sweet potato 0.00%
Turmeric 0.00%
Wheat 0.04%
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Size
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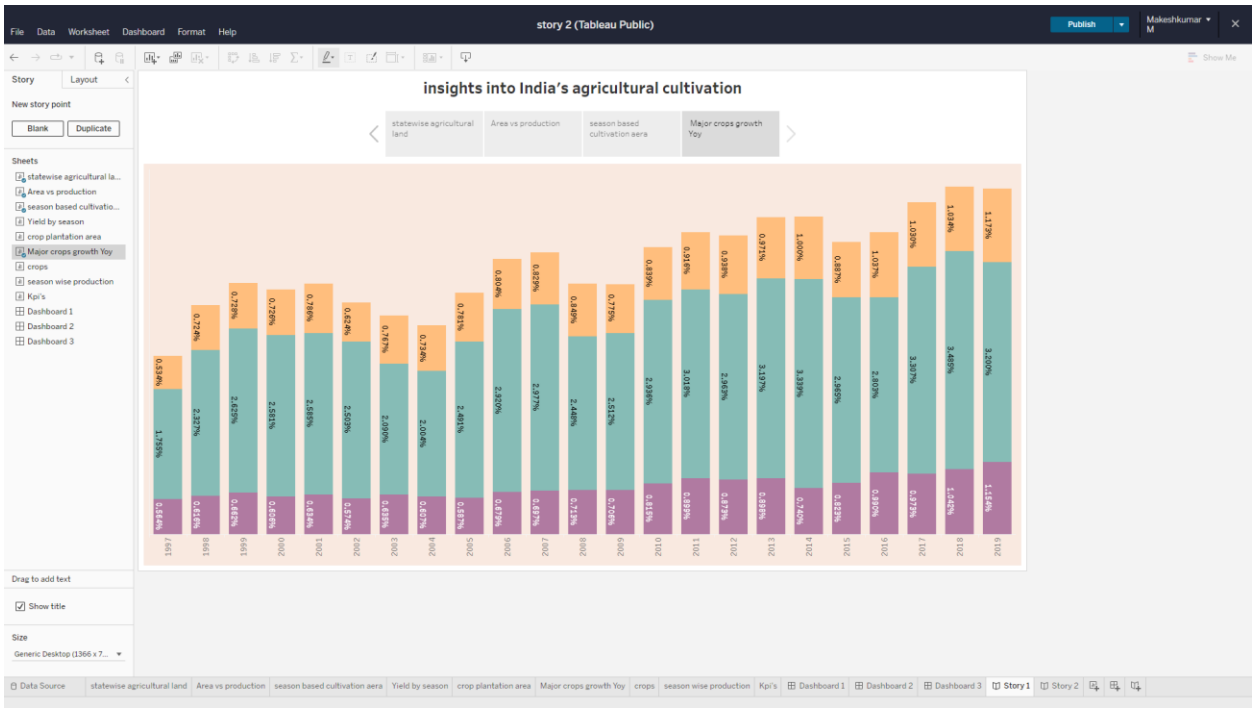
Data Source
statewise agricultural land
Area vs production
season based cultivation aera
Yield by season
crop plantation area
Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
Dashboard 2
Dashboard 3
Story 1
Story 2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season based cultivatio...
Yield by season
crop plantation area
Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
Dashboard 2
Dashboard 3
insights into India's agricultural cultivation
statewise agricultural land
Area vs production
season based cultivation aera
Major crops growth Yoy
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
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Data Source
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Area vs production
season based cultivation aera
Yield by season
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Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
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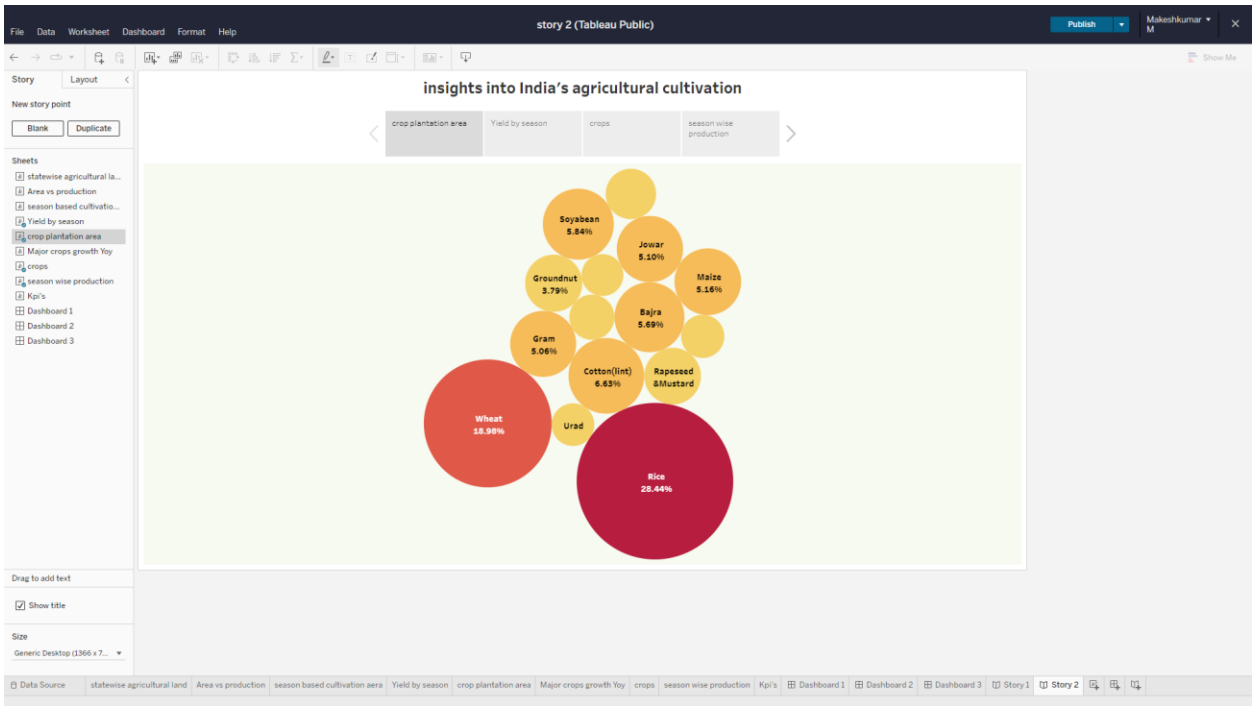
Story 1
Story 2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crop plantation area
Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
Dashboard 2
Dashboard 3
insights into India's agricultural cultivation
crop plantation area
Yield by season
crops
season wise production
Soyabean 5.84%
Jowar 5.10%
Groundnut 3.79%
Maize 5.16%
Bajra 5.69%
Gram 5.06%
Cotton(lint) 6.63%
Rapeseed &Mustard
Wheat 18.98%
Urad
Rice 28.44%
Drag to add text
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Yield by season
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Major crops growth Yoy
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Kpi's
Dashboard 1
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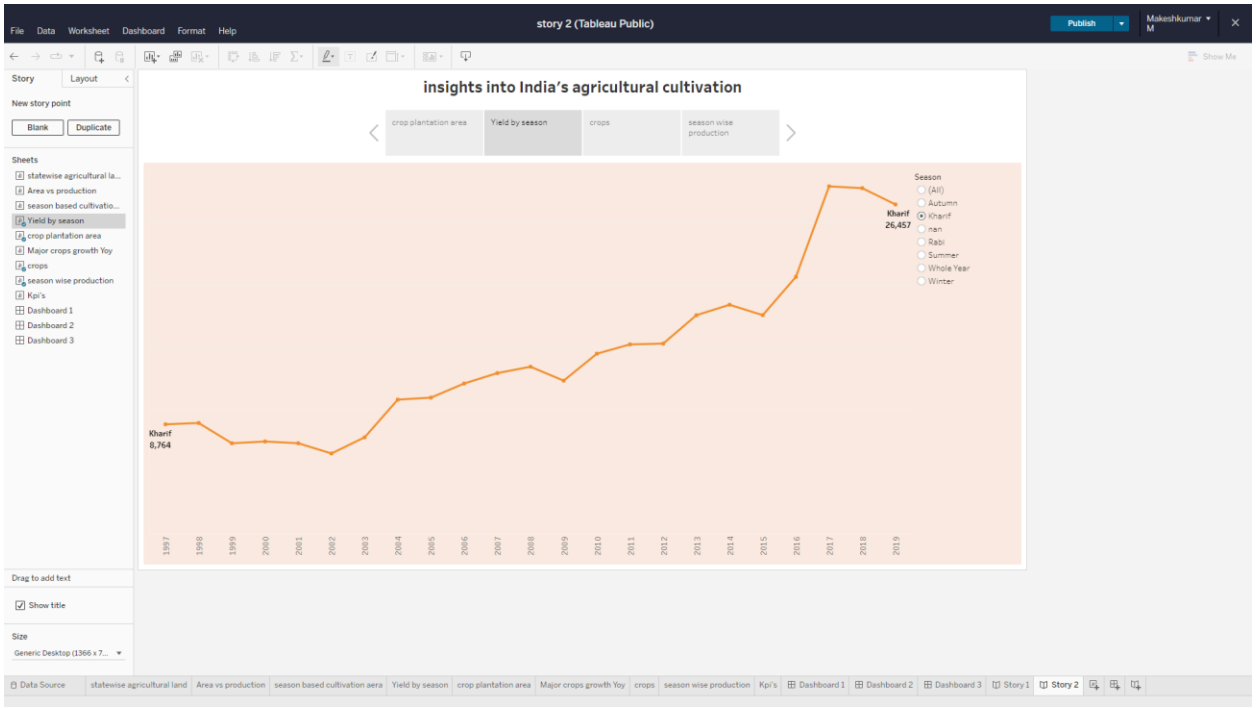
Dashboard 3
Story 1
Story 2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crop plantation area
Major crops growth Yoy
crops
season wise production
Kpi's
Dashboard 1
Dashboard 2
Dashboard 3
insights into India's agricultural cultivation
crop plantation area
Yield by season
crops
season wise production
Season
(All)
Autumn
Kharif
nan
Rabi
Summer
Whole Year
Winter
Kharif 26,457
Kharif 8,764
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
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season based cultivation aera
Yield by season
crop plantation area
Major crops growth Yoy
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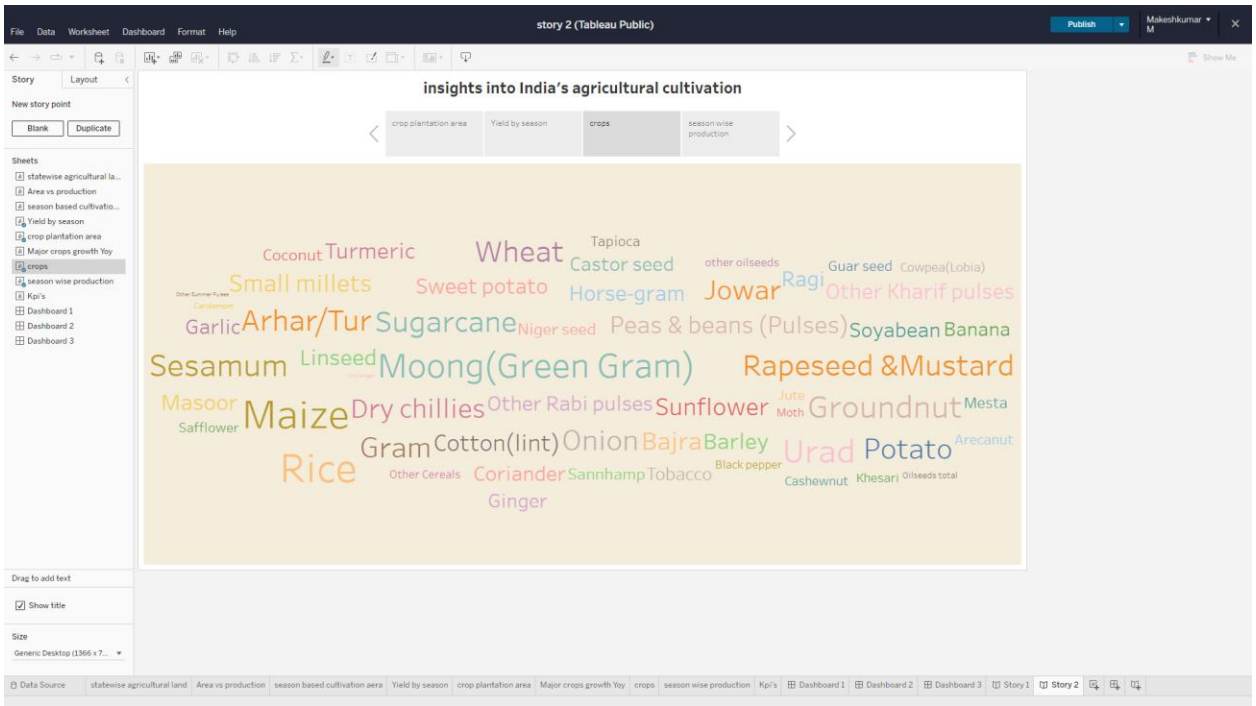
Dashboard 1
Dashboard 2
Dashboard 3
Story 1
Story 2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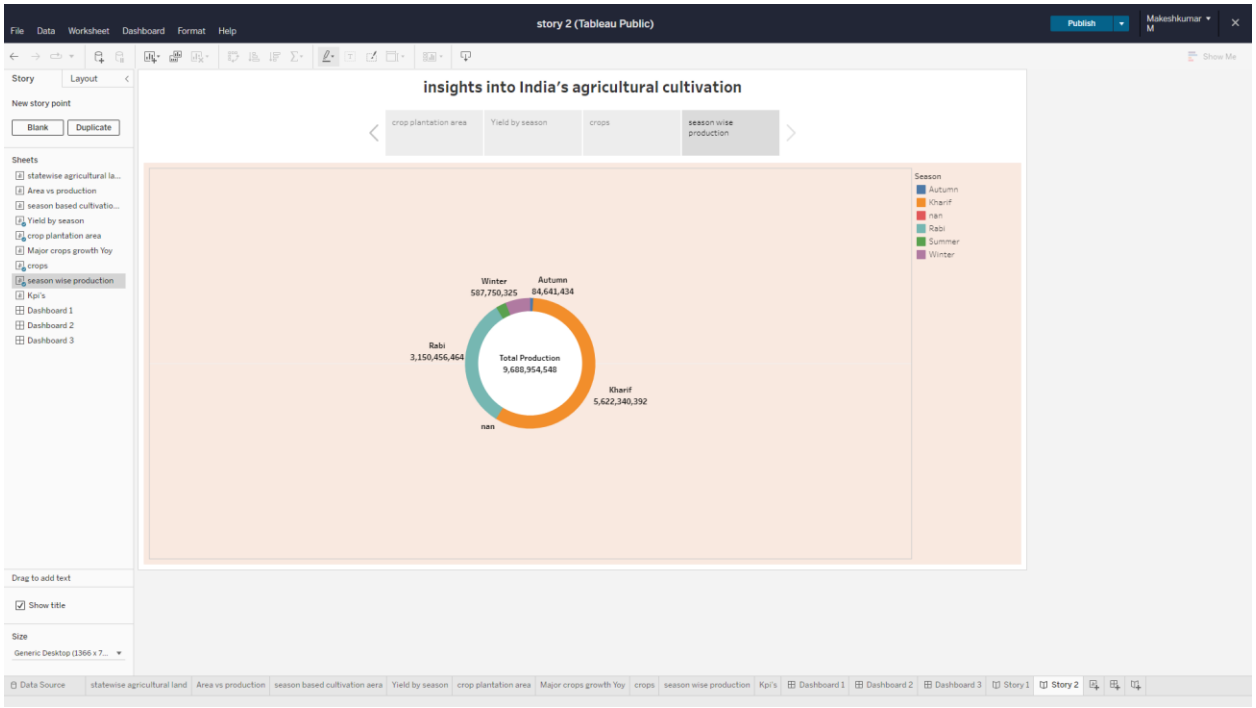
crop plantation area
Yield by season
crops
season wise production
Coconut
Turmeric
Wheat
Tapioca
Castor seed
other oilseeds
Guar seed
Cowpea(Lobia)
Small millets
Sweet potato
Horse-gram
Jowar
Ragi
Other Kharif pulses
Garlic
Arhar/Tur
Sugarcane
Niger seed
Peas & beans (Pulses)
Soyabean
Banana
Sesamum
Linseed
Moong(Green Gram)
Rapeseed &Mustard
Masoor
Maize
Dry chillies
Other Rabi pulses
Sunflower
Jute
Moth
Groundnut
Mesta
Safflower
Gram
Cotton(lint)
Onion
Bajra
Barley
Urad
Potato
Arecanut
Rice
Other Cereals
Coriander
Sannhamp
Tobacco
Black pepper
Cashewnut
Khesari
Oilseeds total
Ginger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Season
Autumn
Kharif
nan
Rabi
Summer
Winter
Winter
587,750,325
Autumn
84,641,434
Rabi
3,150,456,464
Total Production
9,688,954,548
Kharif
5,622,340,392
nan

4 ADVANTAGES & DISADVANTAGES

4.1 ADVANTAGES

1. **Increased Efficiency** – Modern farming methods are more efficient than traditional methods, with advanced machinery and equipment, allowing farmers to produce larger quantities of crops in less time and with less labor.
2. **Improved Crop Quality** – The use of advanced techniques such as precision farming and genetic engineering has led to the development of higher quality crops that are more resistant to pests and disease.
3. **Reduced Environmental Impact** – Modern agriculture techniques are designed to be more sustainable, with a focus on reducing waste, conserving resources, and minimizing the use of harmful chemicals.
4. **Increased Food Production** – Modern agriculture has enabled farmers to produce larger quantities of food, helping to address food shortages and hunger in many parts of the world.
5. **Economic Benefits** – Modern agriculture has had a positive impact on the economy, by creating jobs and generating revenue for farmers, agribusinesses, and related industries.

4.2 DISADVANTAGES

1. **Soil Degradation** – The intensive use of modern farming practices, such as heavy use of chemical fertilizers and pesticides, can lead to soil degradation over time, reducing soil fertility and leading to erosion.

2. **Biodiversity Loss** – Modern agriculture can have a negative impact on biodiversity, with the use of monoculture and genetically modified crops leading to a loss of natural diversity in plant and animal species.
3. **Water Pollution** – The excessive use of chemical fertilizers and pesticides in modern agriculture can lead to runoff and contamination of nearby water sources, potentially harming aquatic ecosystems and human health.
4. **Health Risks** – The use of chemicals in modern agriculture can pose health risks to farmers and farm workers who are exposed to these chemicals on a regular basis.
5. **Food Safety Concerns** – The use of genetically modified crops and hormones in modern agriculture has raised concerns about the safety of the food supply, with some studies suggesting potential long-term health effects.

6. APPLICATIONS

- Precision soil sampling, data collection, and data analysis, enable localized variation of chemical applications and planting density to suit specific areas of the field.
- Accurate field navigation minimizes redundant applications and skipped areas, and enables maximum ground coverage in the shortest possible time.
- Ability to work through low visibility field conditions such as rain, dust, fog and darkness increases productivity.
- Accurately monitored yield data enables future site-specific field preparation.
- Elimination of the need for human "flaggers" increases spray efficiency and minimizes over-spray.

7 CONCLUSION

In conclusion, Agriculture has given so much to society. But it has its own pros and cons that we can't overlook. Furthermore, the government is doing his every bit to help in the growth and development of agriculture; still, it needs to do something for the negative impacts of agriculture.

Agriculture is one of the major sectors of the Indian economy. It is present in the country for thousands of years. Over the years it has developed and the use of new technologies and equipment replaced almost all the traditional methods of farming. Besides, in India, there are still some small farmers that use the old traditional methods of agriculture because they lack the resources to use modern methods. Furthermore, this is the only sector that contributed to the growth of not only itself but also of the other sector of the country.

8 FUTUREV SCOPE

Is agriculture good for future? Yes, agriculture is good for the future as it is expected to use advanced technologies and innovations to produce more food with limited land and resources, increase efficiency on farms, and become more profitable, efficient, safe, and environment friendly.