Project Report

1.INTRODUCTION

Project Description

1.1. Overview

This report delves into the captivating realm of India's agricultural cultivation, providing a comprehensive visual exploration of key aspects and trends in the agricultural sector. Through the visual representations, readers can gain valuable insights into crop production, seasonal variations, regional distribution, and overall production trends. These visualizations enable intuitive analysis, allowing stakeholders to uncover patterns, identify areas of growth or concern, and make data-driven decisions.

1.2. Purpose

India’s Agricultural Crop Production Analysis (1997-2021) In Data Collection

Crop Diversification:

Over the years, India has seen diversification in crops, with a shift from predominantly cereal crops (like rice and wheat) to horticulture, oilseeds, and pulses

Green Revolution:

The period from the late 1960s to the 1980s witnessed the Green Revolution in India, which significantly increased crop yields through the adoption of modern agricultural techniques and high-yielding crop varieties.

Government Policies:

Government policies and subsidies have played a vital role in shaping crop production. Programs like the Minimum Support Price (MSP) have influenced crop choices.

Climate Change:

Climate variability and changing weather patterns have impacted crop production, leading to challenges related to water availability and crop yield stability

Technology Adoption:

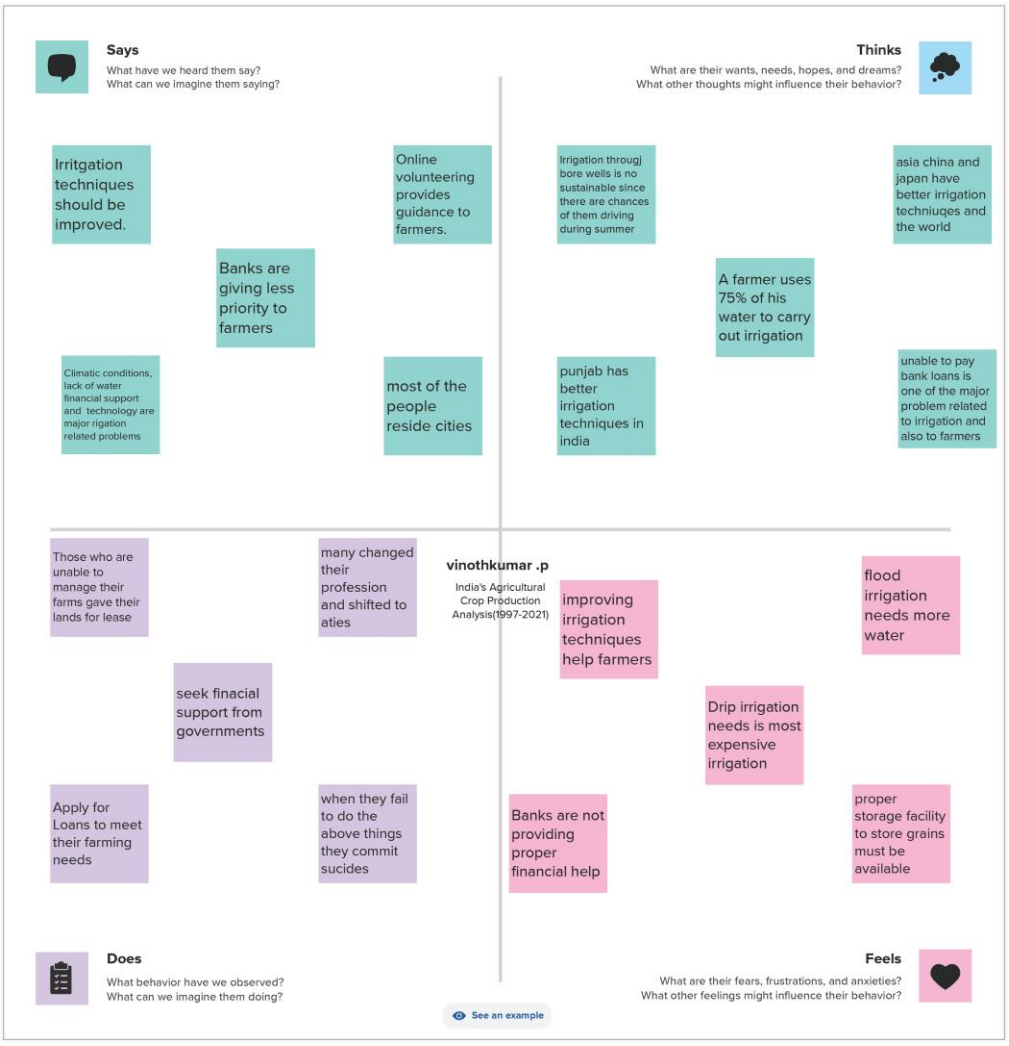
The adoption of technology in agriculture, such as improved seeds, mechanization, and irrigation, has influenced crop productivity.

Crop Yield Fluctuations:

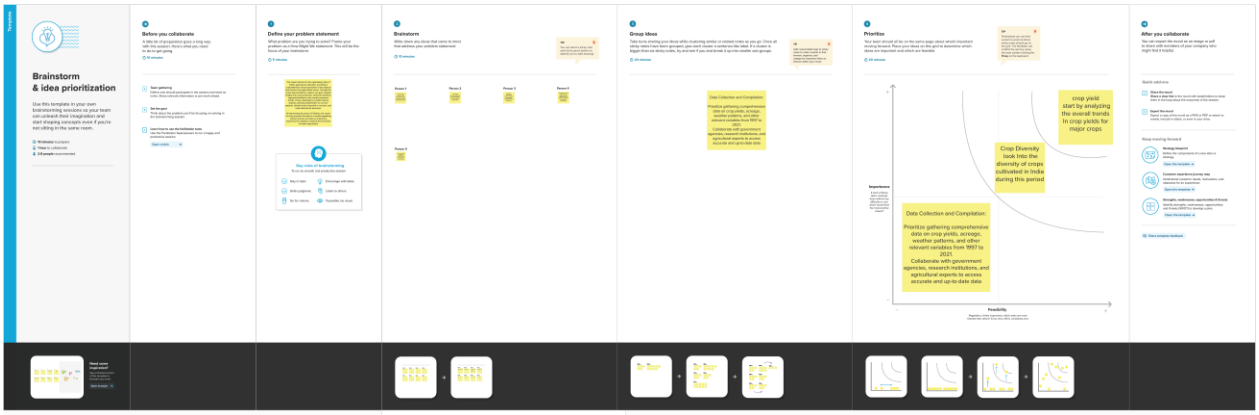
Crop production has been subject to fluctuations due to factors like droughts, floods, and pest outbreaks.

2.PROPLEM DEFINITION & DESIGN THINKING

2.1 Empathy map

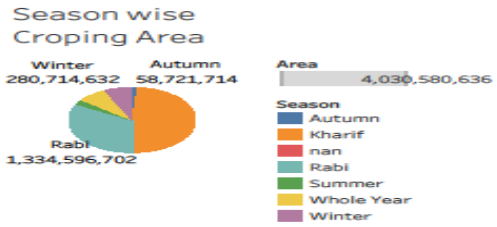


2.2 IDEATION & BRAINSTROMING MAP



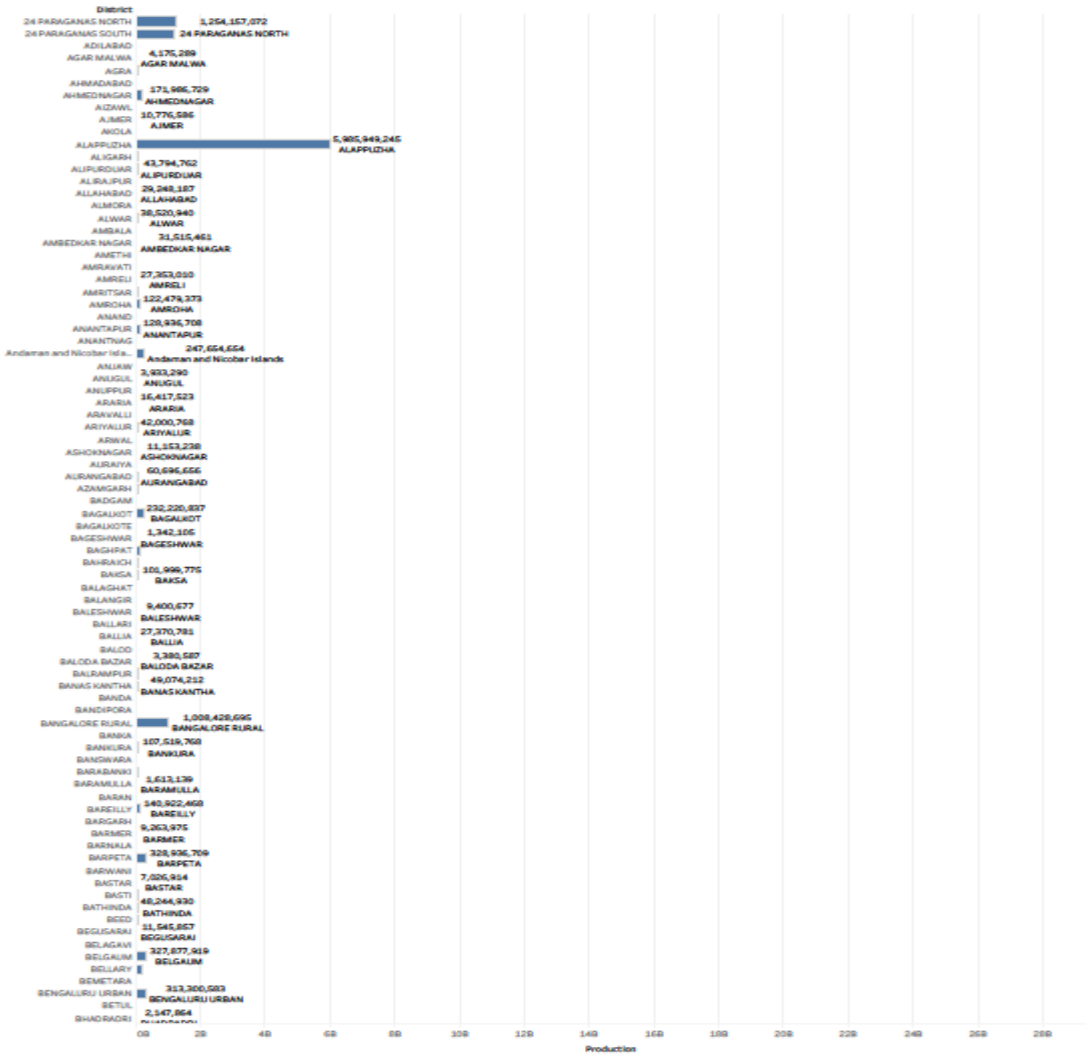
3.RESULT

SHEET:1

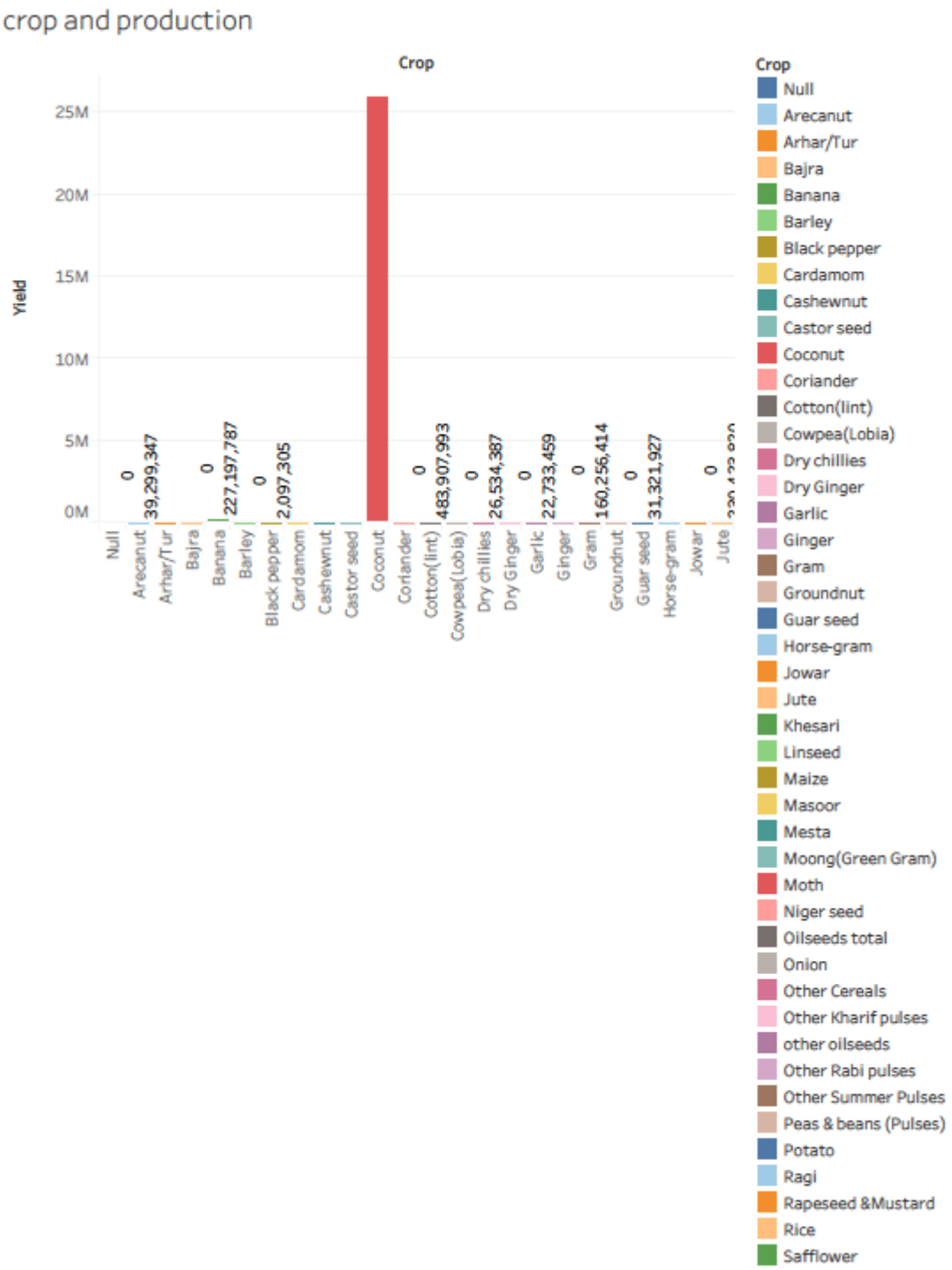


SHEET:2

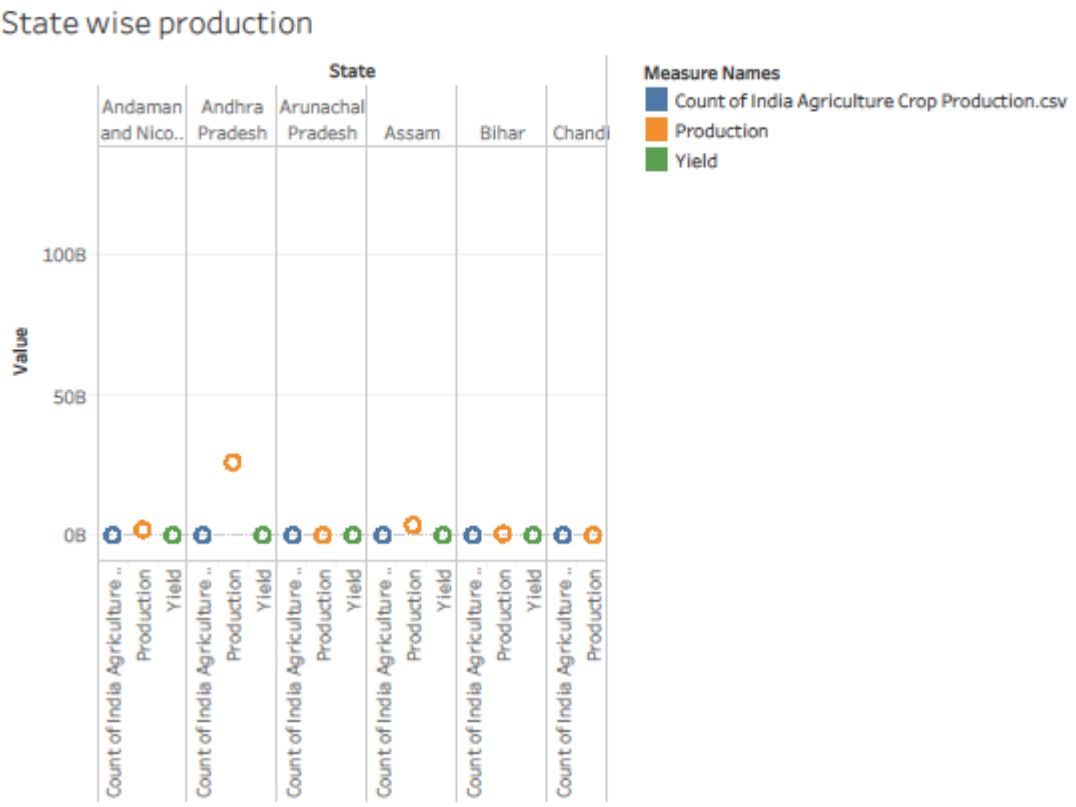
District wise production



SHEET:3

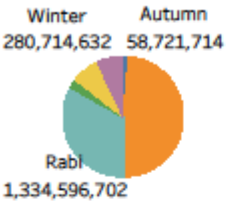

crop and production
Crop
Yield
25M
20M
15M
10M
5M
0M
0
39,299,347
0
227,197,787
0
2,097,305
0
483,907,993
0
26,534,387
0
22,733,459
0
160,256,414
0
31,321,927
0
Null
Arecanut
Arhar/Tur
Bajra
Banana
Barley
Black pepper
Cardamom
Cashewnut
Castor seed
Coconut
Coriander
Cotton(lint)
Cowpea(Lobia)
Dry chillies
Dry Ginger
Garlic
Ginger
Gram
Groundnut
Guar seed
Horse-gram
Jowar
Jute
Crop
Null
Arecanut
Arhar/Tur
Bajra
Banana
Barley
Black pepper
Cardamom
Cashewnut
Castor seed
Coconut
Coriander
Cotton(lint)
Cowpea(Lobia)
Dry chillies
Dry Ginger
Garlic
Ginger
Gram
Groundnut
Guar seed
Horse-gram
Jowar
Jute
Khesari
Linseed
Maize
Masoor
Mesta
Moong(Green Gram)
Moth
Niger seed
Oilseeds total
Onion
Other Cereals
Other Kharif pulses
other oilseeds
Other Rabi pulses
Other Summer Pulses
Peas & beans (Pulses)
Potato
Ragi
Rapeseed &Mustard
Rice
Safflower

SHEET:4

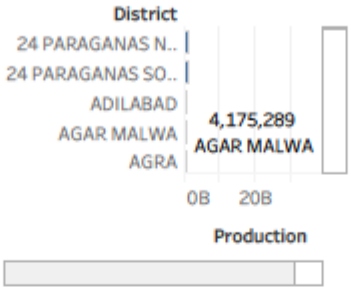


DASHBORAD

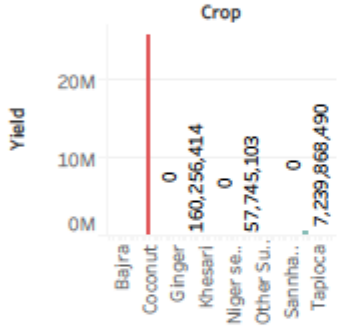
Season wise Croping Area



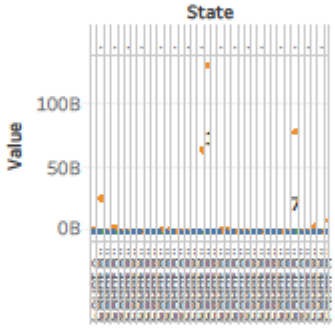
District wise production



crop and production



State wise production



STORY


Story 1
The India's their agriculture season a..
The India's agriculture District and their pro..
The India's agriculture crop and their produc..
The India's agriculture state and their produ..
Winter
280,714,632
Autumn
58,721,714
Rabi
1,334,596,702
Season
Autumn
Kharif
nan
Rabi
Summer
Whole Year
Winter
Area
4,030,580,636

4.ADVANTAGES& DISADVANTAGES

1.Natural Environment

Organic farming usually goes down in a natural environment. Unnecessary enclosures are not used for the crops or plants. This way the productivity is increased and is way better compared to closed spaces. An open and natural area for growing the crops would give them wild and instinctive growing nature. This is ideal for the crops and is one of the factors that leads to the plants being organic.

2. No Chemicals

Unlike other forms of farming, organic farming does not involve any artificial sources like chemicals to drive away pests or to speed up the process of farming. These chemicals are often used in commercial and industrial farming methods. However, organic farming stays true to its title. Its method is true to its natural core and does not use anything that may be of harm to its consumers. Any type of chemical is not entertained in the organic farming industry.

3. Eye On You

Unlike any other procedure, organic farming has a very strict supervision schedule. The reason for this extreme regulation is because of the importance to keep the label organic. It is very difficult to do so as most brands use artificial aspects in their farming. There are various methods of organic farming and its standards must be maintained in order to remain organic. This ensures that customers buying the end product receive what they're truly looking for.

4. Environmentally Friendly

Among the advantages of organic farming, this one stands out the most. Today, almost the entire sector of industrial farming consists of chemicals that ruin the environment. However, when you have something like organic farming to replace it, a huge benefit is received. Organic farming does not use any form of chemical nor does any form of pollution happen because of it. This makes it way better than regular farming. The whole world suffers because of the ignorant methods of regular farming including animals. Organic farming is definitely the way to go.

5. Healthier And Tastier

Since non-organic farming produces results that are way too suspicious when eaten, it is obvious that it isn't good for health either. Organic farming in kerala for example are known to keep the crops growing properly. They are given time and care unlike non-organic sectors that pump the

results with chemicals in order for it to grow faster. These type of sectors are only commercial-minded and are least bothered about the satisfaction and health of the consumer. Since the fruits and vegetables grown organically are given longer time to flourish, they automatically are way better in terms of nutrition and taste.

DISADVANTAGES

1. 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.

2. More Labor

Organic farming is a sector that requires a lot of patience. This is because pests and others obstacles must be tackled manually. Unlike in non-organic farming, the use of pesticides and other chemicals are not permitted. This makes the work of the farmer harder as constant attention and care is needed. Due to the constant attention, a lot of time is consumed. Organic farming has to be executed well which needs a lot of time and not to forget weed-prevention.

3. High MRP

It is almost obvious that due to the extreme care taken to go along with organic farming, the results would be kept at a high price. Once sold to the market, most of the place is devoted to the sale of these organic fruits and vegetables. Most people do that approve of organic products because of this. The items sold in the market are half the price of non-organic products. So, we can say that organic items are expensive and not every consumer is willing to pay the price for it.

4. Cross Breeding Problem

The seeds of GMO plants once planted, create GMO crops. These crops then produce seeds and the pattern continues. This makes it very difficult to tell from the organic and GMO crops. This has become a huge problem in the organic farming sector. This could ruin the future of organic planting as a whole.

5. Labor Charges

Labor charges refer to the amount payable to someone who has been involved in the building at working of something. Like we said earlier, in organic farming ventures, the amount of labor is high and it takes a lot of time and patience to the get work done. If one is not able to do it by oneself, a lot of labor would be hired which increases the payment that those laborers deserve.

5.APPLICATION

Crop Management:

Farmers use mobile apps to track crop growth, monitor weather conditions, and receive alerts for diseases or pest infestations.

Soil Testing:

Apps assist in soil testing and analysis to determine nutrient levels and recommend appropriate fertilizers.

Market Information:

Apps provide real-time market prices for crops, helping farmers make informed selling decisions.

Weather Forecast:

Weather forecasting apps help farmers plan planting and harvesting activities based on weather predictions.

Irrigation Management:

Mobile apps help optimize water usage through scheduling and control of irrigation systems.

Farm Management:

These apps help farmers manage resources, finances, and inventory.

Pest and Disease Management:

Apps offer information on pest and disease identification and management techniques.

Government Schemes:

Farmers can access information on government schemes and subsidies through dedicated apps.

Agri-Financing:

Some apps offer access to credit and insurance options for farmers.

6.CONCLUSION

Indian agriculture plays a critical role in the country's economy and sustains the livelihoods of millions. However, it faces challenges like outdated practices, climate change impacts, and the need for modernization. To secure a prosperous future for Indian agriculture, there's a need for sustainable practices, technological advancements, infrastructure development, and policy reforms. Additionally, addressing issues like land fragmentation, farmer welfare, and market access are essential for the sector's growth and food security in India.

7.FUTURE SCOPE

Technology Adoption:

Embracing modern agricultural technologies, such as precision farming, drones, and Iot, can enhance productivity and reduce resource wastage.

Sustainable Farming:

A shift towards sustainable and organic farming practices is crucial to address environmental concerns and meet global quality standards.

Crop Diversification:

Encouraging diversification beyond staple crops can reduce dependency on a few crops and enhance income for farmers.

Agri-Exports:

Expanding agricultural exports can boost the income of farmers and strengthen the Indian economy.

Water Management:

Efficient water management, including rainwater harvesting and irrigation improvements, is essential to combat water scarcity.

Infrastructure Development:

Investments in rural infrastructure, cold storage, and transportation networks can reduce post-harvest losses.

Government Initiatives:

Government policies and initiatives, like PM-KISAN and FPOs, can support small and marginal farmers.

Climate Change Adaptation:

Preparing for climate change challenges and extreme weather events is critical for long-term sustainability.

Skill Development:

Enhancing the skills and knowledge of farmers through training programs is vital for modernizing agriculture.