Croppers

Table of contents

01 Introduction

02 Problems

03 Solutions

04 Tech Stack

‘Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals, and happiness.’

~Thomas Jefferson

01

Introduction

Agriculture in INDIA

Agriculture is often rightly described as the backbone of the Indian economy. According to the India Brand Equity Foundation, agriculture is the primary source of livelihood for about 58 percent of India's population, and the Gross Value Added by agriculture, forestry and fishing is being estimated at Rs 17.67 trillion ($274.23 billion) in FY18. In fact, since Independence, our agriculture output has grown from 145 million metric tons (MMT) to over 750 MMT in volume terms.

02

Problems faced

Formal Sector Loan Disbursal

*(Rs. crore)

Year	Cooperative banks	Regional Bank	Coomercial Bank	Total
2015-2016	153295	119261	642954	915510
2016-2017	142758	123216	799781	1065755
2017-2018	150389	140959	877155	1168503
2018-2019	152340	149667	954823	1256830
2019-2020	157367	165326	1070036	1392729
CAGR	12.97	22.93	21.84	19.81

Informal Sector Loan

- The charge of interest rate is up to 15 – 20 %
- The major lenders for this are big farmers or zamindars .
- Informal Sector Loans still contains 40% of market share of loan in 2023
- The total market cap of informal sector aggregates more than 8 Lakh crores

Weather Shift

The climate change impact assessment was carried out using the crop simulation models by incorporating the projected climates of 2050 & 2080 , In absence of adoption of adaptation measures following are results :

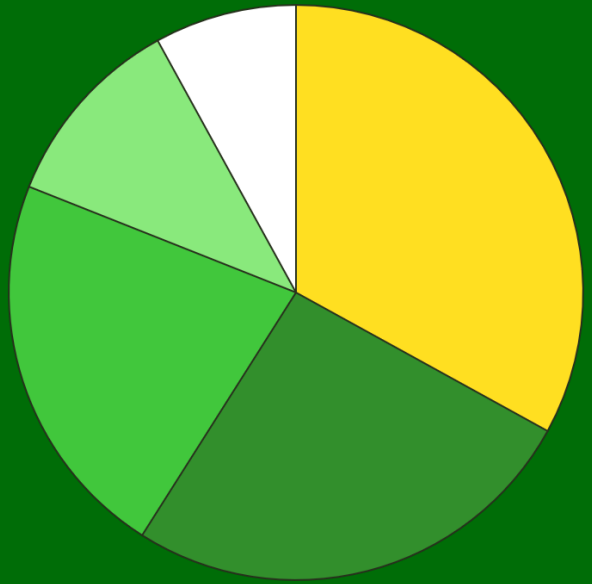
- Rainfed rice yields in India are projected to reduce by 20% in 2050 and 47% in 2080
- Wheat yields in India are projected to reduce by 19.3% in 2050 and 40% in 2080 scenarios
- Kharif maize yields in India are projected to reduce by 18 and 23% in 2050 and 2080 scenarios

Irrational Crop Management

Every year in India cereal crop residues contribute, about 2/3rd of total 683 million tons (MT) of residue produced and the portion of surplus residue generation from different crops

- The major reasons for it are :
- Farm mechanization and use of combine harvester
- Storage problem and commercial usage
- Short window for sowing wheat
- Management of weed and pest

Crop Residue Generation



33%	Rice
21%	Wheat
17%	Sugarcane
10%	Cotton
11%	Other

Percentage (%) of dry biomass share from different crop residue in India. For more info click here

03

Solutions

Listing of Government Initiatives

- Creating a database for all the government based schemes
- Simplifying the schemes by uncovering the hidden T&Cs.
- Providing multi-lingual support
- Only providing real-time active schemes
- Providing assured contacts and verified links to prevent cybercrime

Weather Update

- Providing real-time and future weather updates
- Creating heatmaps to indicate precipitation and windspeed
- Suggested method with current weather update
- Push notifications to phone if climate get worse

Management of Crop

- Suggesting correct crop cycles
- To avoid problem of surplus crop locating nearby warehouses
- Providing an authentic marketplace for farm mechanization and crop nutrients
- Inventory management

04

Tech Stack

HTML
JS
node
JS
B
Bootstrap
UI

Summary of Project

We implemented AI chat bot assistant , weather heatmap and government schemes due to time and technical barrier constraints we were not be able to work on databases but for the long term vision we plan to enlist all the government related schemes in sector of agriculture.

Thanks!

Do you have any questions?