

Project Report

District-wise Farmer Crop Pricing & Profitability Analysis (Tamil Nadu)



Project Title:

District-wise Farmer Crop Pricing & Profitability Analysis – Tamil Nadu



Objective:

The goal of this project is to help identify the **most profitable crops** across various **districts of Tamil Nadu** by analyzing the relationship between **crop prices, input costs, and net profitability**. This analysis can help farmers, agricultural officers, and policymakers make better crop planning decisions.



Data Sources:

Primary File: Farmer_Crop_Profitability_TN.xlsx

Source: Agmarknet.gov.in (Price data) + manually compiled crop input cost data.

District Covered: Villupuram (sample), extendable to all TN districts.

Data Points:

Crop Name

District

Season

Input Cost

Selling Price

Net Profit

❖ Tools Used:

Excel: Data cleaning, profit calculation, chart creation

Power BI: Interactive dashboard development, filtering, and visualization



Methodology:

Data Cleaning & Preprocessing:

Removed missing/null values

Normalized district and crop names

Converted units where necessary (e.g., kg → quintal)

Profitability Calculation:

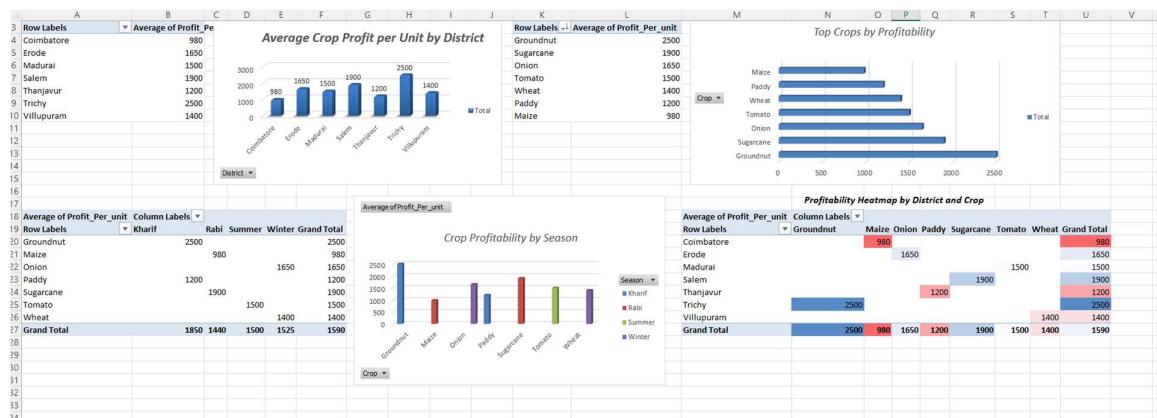
Revenue = Price per Quintal × Yield per Acre

Profit = Revenue - Input Cost

Visualization in Excel:

Heatmaps: Crop-wise profit comparison

Bar Charts: Profit distribution across crops

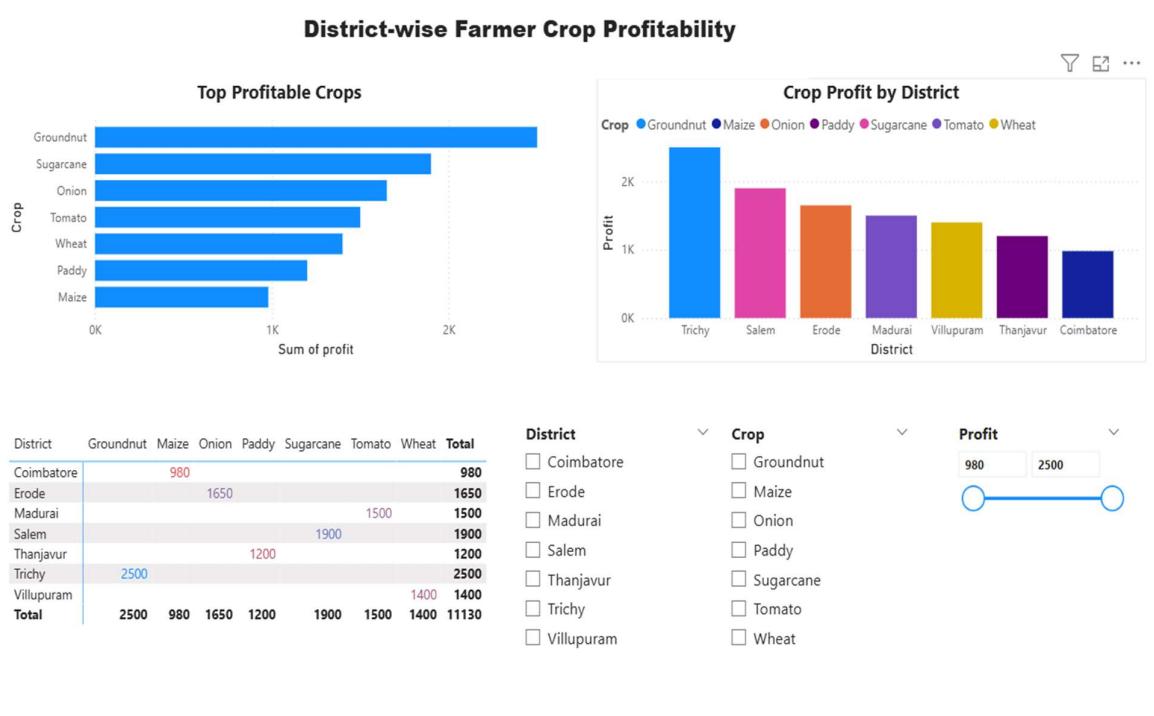


Power BI Dashboard:

Slicers for crop, district, season

Charts showing top 5 profitable crops

Profitability heatmap across districts



🔍 Key Insights:

- **Paddy** is consistently one of the most profitable crops in Villupuram.

- **Groundnut** shows moderate profit but requires lower investment.
- Some crops like **Maize** may result in lower margins due to high input costs or market volatility.
- District-specific patterns observed: certain crops perform better in specific districts due to soil and market factors.

Deliverables:

Deliverable	Status
Excel File with Raw + Cleaned Data	<input checked="" type="checkbox"/> Done
Profit Calculations in Excel	<input checked="" type="checkbox"/> Done
Charts in Excel	<input checked="" type="checkbox"/> Done
Power BI Dashboard (.pbix)	<input checked="" type="checkbox"/> Done
Dashboard with Filters (Crop/District)	<input checked="" type="checkbox"/> Done
Final Report (This Document)	<input checked="" type="checkbox"/> Done

Files Included:

Farmer_Crop_Profitability_TN.xlsx

Profitability_Charts.xlsx

Profitability_Dashboard.pbix

Conclusion:

This analysis clearly highlights **which crops generate the highest profit per acre**, helping farmers make **informed cultivation decisions**. With further district-level data, this model can be scaled to a state or even national level. Future enhancements can include weather data, soil health, or subsidy mapping.