Story 2

CROP ANALYSIS | STATE WISE CROP ANALYSIS | DATA VISUALISATION ON CROP

STATISTICAL CROP ANALYSIS

Data-Driven Agriculture:

Food security is a crucial global need, threatened by population growth, climate change,

Data-driven agriculture is the most promising approach to solving these current and futu

and ensuring sustainability.

New technologies, such as cloud computing, Internet of Things (IoT), Big Data, and mach

processing, and analysis.

Farms are becoming increasingly data-driven, enabling the development of smart farmin

Digital Agriculture:

Also known as agrotechnology and precision agriculture.

Promotes agricultural productivity while minimizing environmental impact through data

Data sources include sensors, satellite imagery, videos, and photographs.

Enables better decisions by understanding crop dynamics, weather conditions, soil healt

Challenges Addressed:

Food Demand: By 2050, global food demand is expected to increase significantly.

Doubling Food Production: Doubling food production per hectare is crucial by the time th

Threats to Food Security: Population increase, climate change, decreasing arable land, a

Technological Solutions:

Cloud Computing: Enables efficient data storage and retrieval.

Internet of Things (IoT): Connects smart sensors Anand devices on farms.

Big Data and ML:alyze data for informed decisions.

Smart Farming: Real-time responses triggered by events (e.g., disease alerts, weather cl

Crop Physiology and Optimization:

Understanding how crops respond to environmental factors and stresses.

Developing strategies to optimize growth and productivity.

Remember, data-driven approaches are reshaping agriculture, ensuring sustainable food

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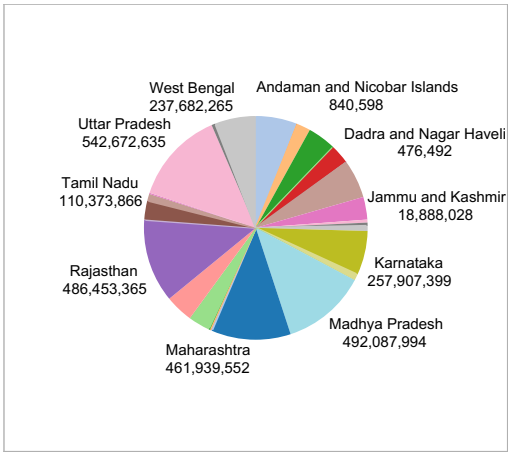

Area
4,030,580,636

State
- Andaman and Nicobar Isl..
- Andhra Pradesh
- Arunachal Pradesh
- Assam
- Bihar
- Chandigarh
- Chhattisgarh
- Dadra and Nagar Haveli
- Daman and Diu
- Delhi
- Goa
- Gujarat
- Haryana
- Himachal Pradesh
- Jammu and Kashmir
- Jharkhand
- Karnataka
- Kerala
- Laddakh
- Madhya Pradesh
- Maharashtra
- Manipur
- Meghalaya
- Mizoram
- Nagaland
- Odisha
- Puducherry
- Punjab
- Rajasthan
- Sikkim
- Tamil Nadu
- Telangana
- Tripura
- Uttar Pradesh
- Uttarakhand
- West Bengal

Official Data Sources:
The **Directorate of Economics and Statistics**, under the **Department of Agriculture and Farmers Welfare**, Ministry of Agriculture and Farmers Welfare, Government of India, provides comprehensive state-wise agricultural statistics.
Exploratory Data Analysis (EDA):
Researchers and data enthusiasts have explored Indian crop production data.
For instance, a dataset covering **33 Indian states and Union Territories** has been analyzed.
States like **Uttar Pradesh**, **Madhya Pradesh**, and **Karnataka** contribute more data due to their prominence in agriculture 2.
State-Level Studies:
Researchers often consider **17 major states/Union Territories** for in-depth agricultural analysis.
These studies examine crop diversification, productivity, and challenges faced by each state 3.
Crop Yield Patterns:
Let's explore some intriguing patterns for the year **2022-23**:
Punjab and **Haryana** lead in cereal production.
West Bengal and **Odisha** excel in rice yields.
Other states exhibit unique crop dynamics.

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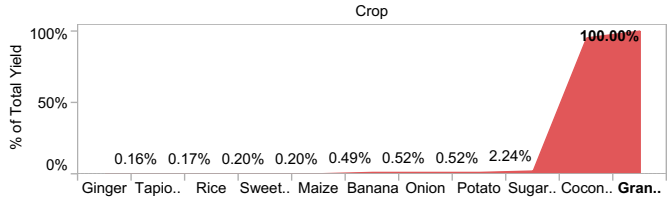
CROP ANALYSIS (1997 -2021)

MAJOR CROPS GROWTH YOY



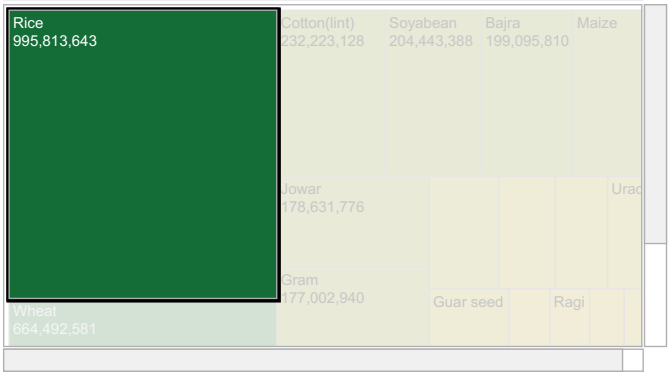
Top 10 crops - (kpi)

Area Units	Crop	
Hectare	Arhar/Tur	10,895
	Groundnut	12,586
	Maize	20,507
	Moong(Green Gram)	15,101
	Rapeseed &Mustard	11,034
	Rice	21,611
	Sesamum	13,049
	Sugarcane	

KPI'2

District	Area	Count of India Ag..	Production	Yield
TIRUPATHUR	149,202,016 13,994	149,202,016 7	149,202,016 149,202,016	149,202,0 13,1
TUMAKURU	1,453,784,655 508,818	1,453,784,655 59	1,453,784,655 1,453,784,655	1,453,784,6 8,5
KOLLAM	9,144,799,981 2,388,569	9,144,799,981 334	9,144,799,981 9,144,799,981	9,144,799,9 152,5
KASARAGOD	11,167,266,987 2,291,011	11,167,266,987 364	11,167,266,987 11,167,266,987	11,167,266,9 190,1
THRISSUR	12,893,527,546 2,928,157	12,893,527,546 313	12,893,527,546 12,893,527,546	12,893,527,5 157,5
KANNUR	12,908,734,069 3,434,424	12,908,734,069 339	12,908,734,069 12,908,734,069	12,908,734,0 149,0
THIRUVANA..	13,223,577,010	13,223,577,010	13,223,577,010	13,223,577,0

CROP PLANTATION BY AREA



CROPS