



सत्यमेव जयते

INDIA'S CROP DATA ANALYSIS

In response to the dynamic evolution anticipated within the agriculture sector, driven by advancements in the Future Internet, a novel Business-to-Business collaboration platform has been developed from the perspective of the agri-food industry. This platform endeavors to streamline collaboration among diverse stakeholders across associated business domains, fostering effectiveness and flexibility in their interactions.

Furthermore, this report stems from the culmination of efforts to leverage extensive datasets on crop production in India spanning multiple years. The primary objective is to harness this wealth of information to predict crop production outcomes and unearth critical insights elucidating key indicators and metrics that significantly influence agricultural productivity.

Crop Diversity

70

Total Production

141.18bn

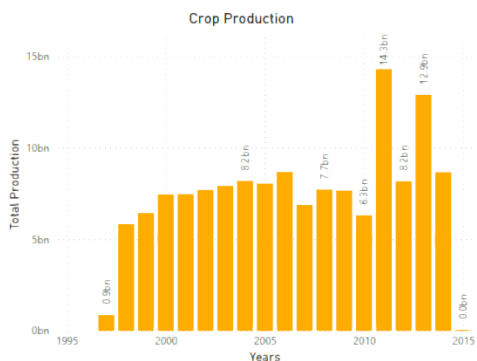
Total Area

2.95bn

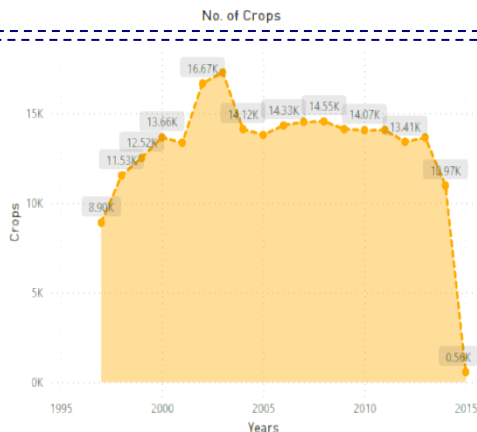
Avg. Produce By Season

427.53K

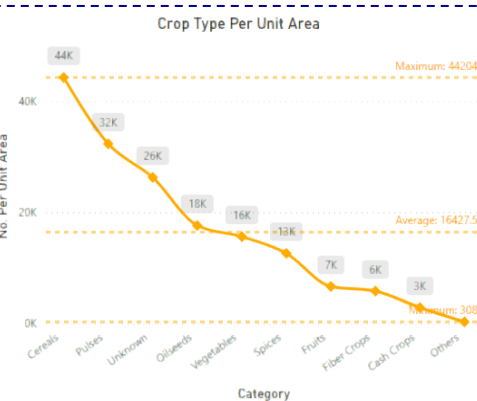
A diverse range of **70** distinct types of crops is evident within the dataset. Over the extensive timeframe from **1995** to **2015**, cumulative production figures amount to an impressive **141.18** billion units, underscoring the magnitude of agricultural output. This substantial production is spread across an expansive area encompassing **2.95** billion units, indicative of the extensive cultivation practices in place. Furthermore, the data highlights an average seasonal production of **427.53** thousand units of produce, illustrating the consistent yield achieved over time. These KPIs provide a **comprehensive overview** of crop production dynamics, laying the foundation for further analysis and strategic decision-making within the agricultural domain.



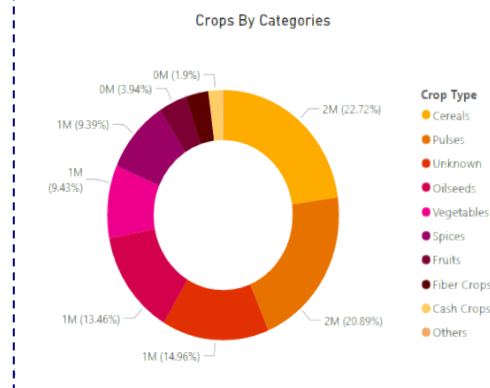
As depicted in the visual representation, the total production has exhibited an upward trend over the specified period, reaching its peak in **2011**. Subsequently, favorable outcomes were observed in **2013**. However, in **2015**, production experienced a significant decline, reaching an **all-time low**.



Similar trends are observed in the number of crops sown, with figures peaking between **2000** and **2005**, reaching a high of **16.67** thousand, before declining to a low of **0.56** thousand in **2015**.



Crop type per unit area refers to the category of crop growing per unit of area. In this context, cereals emerge as the predominant category, reaching a peak of **44** thousand units, while others lag significantly behind at only **308** units. The average crop type per unit area is calculated at **16.42** thousand units.



As depicted in the chart above, the top three grown categories are as follows: **Cereals** with **2** million units, constituting **22.72%** of the total; **Pulses** with **2** million units, accounting for **20.89%**; and **Unknown** with **1** million units, representing **14.96%** of the total. Conversely, **Cash Crops** and **Others** comprise less than **5%** each, signifying their comparatively lower contribution to the overall distribution.



A map of **India** illustrating the Indian states from which this data originates.

Insights: Seasonal Variations: Analysis reveals significant fluctuations in crop production across different seasons, with peak production observed during the Kharif and Rabi seasons, indicating the influence of climatic factors on agricultural output. **Crop Diversity:** The study highlights the rich diversity of crops cultivated across various regions, with some districts exhibiting a wide range of crop varieties, while others specialize in specific crops, underscoring the importance of regional agricultural practices and preferences. **Yearly Production Trends:** Examination of yearly production trends unveils notable patterns and trends over time, with certain years witnessing substantial increases or decreases in crop production, suggesting the impact of factors such as weather conditions, technological advancements, and policy changes. **Predictive Modeling:** Leveraging machine learning algorithms, predictive models are developed to forecast crop production, providing valuable insights for stakeholders to anticipate future agricultural trends, optimize resource allocation, and mitigate potential risks.