Exploratory Data Analysed on Crop Production in India

I had analysing the agriculture crop production dataset and try to analysed category data and numerical data.
Start with 246094 samples rows and 7 Columns. Production Variable had 141.18bn and Area 2.95bn Missing values which was replace with 0 and working dataset has same samples.

Data Preparation and cleaning for using tool

*Using tool - Excel and Power BI
* Data clean, filtering and replace missing values
*Load data in Power Bi from excel

Univarate -Analysis

States_Name – 33 Name including Union territories. Top States contributing to dataset are Kerala, Andhra Pradesh and Tamil Nadu.
District_Name – 646 Name of District according to states wise distributing District crop production and Area.

Crop_Year - Dataset represents data for June 1905 to July 1905 Maximum 19 June 1905 Minimum 07 July 1905.

Season – I saw six seasons with maximum data from Khalif, Rabi, winter and Whole Year.

Crop - All data for 124 Different crop with maximum coconut, Sugarcane and rice.

Area – Huge margin area used for production from 1 to 2953786189 unit area. Distribution is highly right skewed due to lot of 0 outliers.

Production - Production values ranges from 0 to 1.14176E+11 and Distribution is highly skewed due to lot of outliers.

Visualisation of Data

*Top 20 State Area Production
*Year wise Production and Area
*Top50 District wise Production and Area
*Season Wise Production
*Area VS Production
*Top 20 States Crop and Production etc.

Crop Production Analysis

Most Highest States in terms of production per unit area for various categories of crop

* Kerala:- High-Winter and Autumn Low-Summer and kharif || Area 31.91M Production 97.88bn

   Coconut || Tapioca || Rice

*Andhra Pradesh: - high-Kharif low-Rabi || Area 131.55M Production 17.32bn

  Coconut || Rice || Sugarcane

*Tamil Nadu: - High-kharif low-Rabi || Area-
95.90M Production 12.08bn

  Coconut || Rice || Sugarcane

State	Area	Production
Kerala	31908073	97880045376
Andhra Pradesh	131545844	17324590296
Tamil Nadu	95897867	12076443049

Which Crop is seen in season high Frequency and when is it grown in India?

Season

Whole Year - Coconut || Potato || Sesamum
Kharif   - Jute || Mesta || Maize
Rabi   - Potato ||oil Seeds || Wheat

Crop Wise

*Coconut is seen to have more frequency.
*Coconut is grown majority in whole Year Season.
*State wise Kerala Dominates in coconut production.

Which states ranks high in area wise crop production in India?

Top Highest State based on the Area: -
Kerala, Andhra Pradesh,
Tamil Nadu, Uttar Pradesh,
Assam, West Bengal

State	Area	Production
Kerala	31908073	97880045376
Andhra Pradesh	131545844	17324590296
Tamil Nadu	95897867	12076443049
Uttar Pradesh	433631630	3234492663
Assam	70378758	2111751759
West Bengal	215405248	1397904390

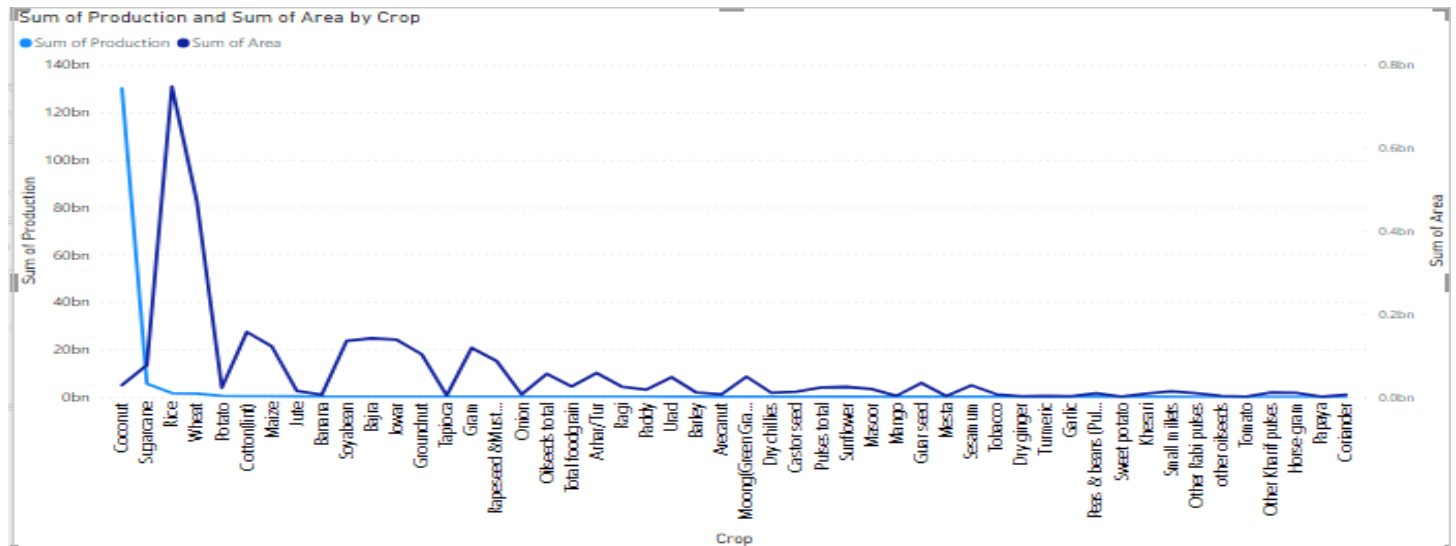# Most efficiency states in terms of production per unit wise area season?

Most efficient states in terms of production per unit area are Kerala, Andhra Pradesh, and Tamil Nadu.

Most valuable states in terms Production per unit area for various category of crop are:

Coconut- Kerala

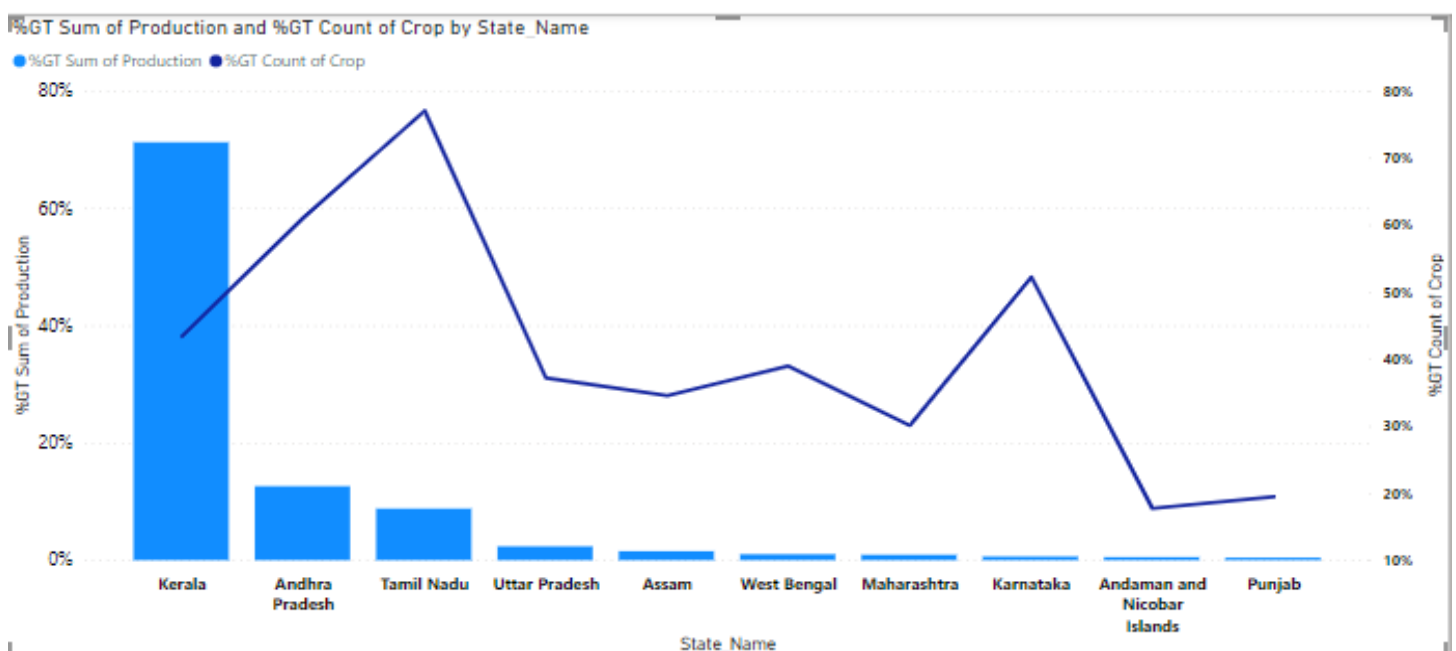Sugarcane- Andhra Pradesh

Rice- Tamil Nadu

Sum of Production and Sum of Area by Crop

*Most valuable all States in terms Production per unit area of crop:

High- Production

Kerala- 71%

Andhra Pradesh-12%

Tamil Nadu- 8%

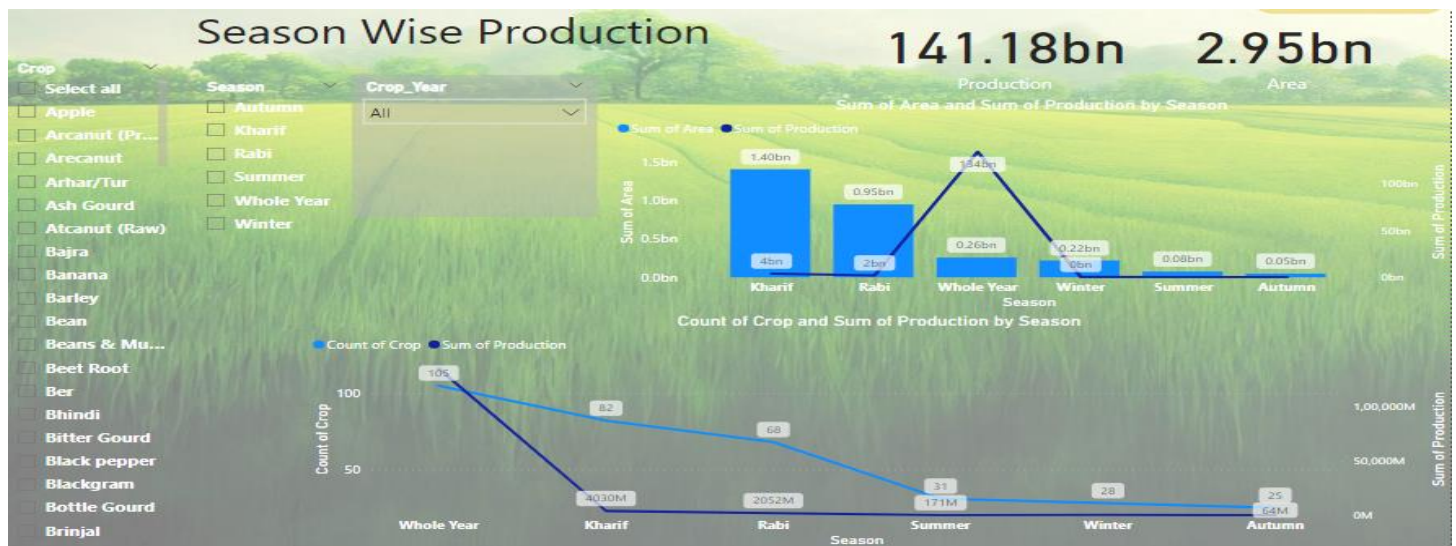%GT Sum of Production and %GT Count of Crop by State_Name

Season Wise Production

All crop and season filter wise production blue bar sun of area season and blue line production indicating like sum of area and sum of production by season.

Khalif and Rabi this season best production also winter lowest summer and autumn.

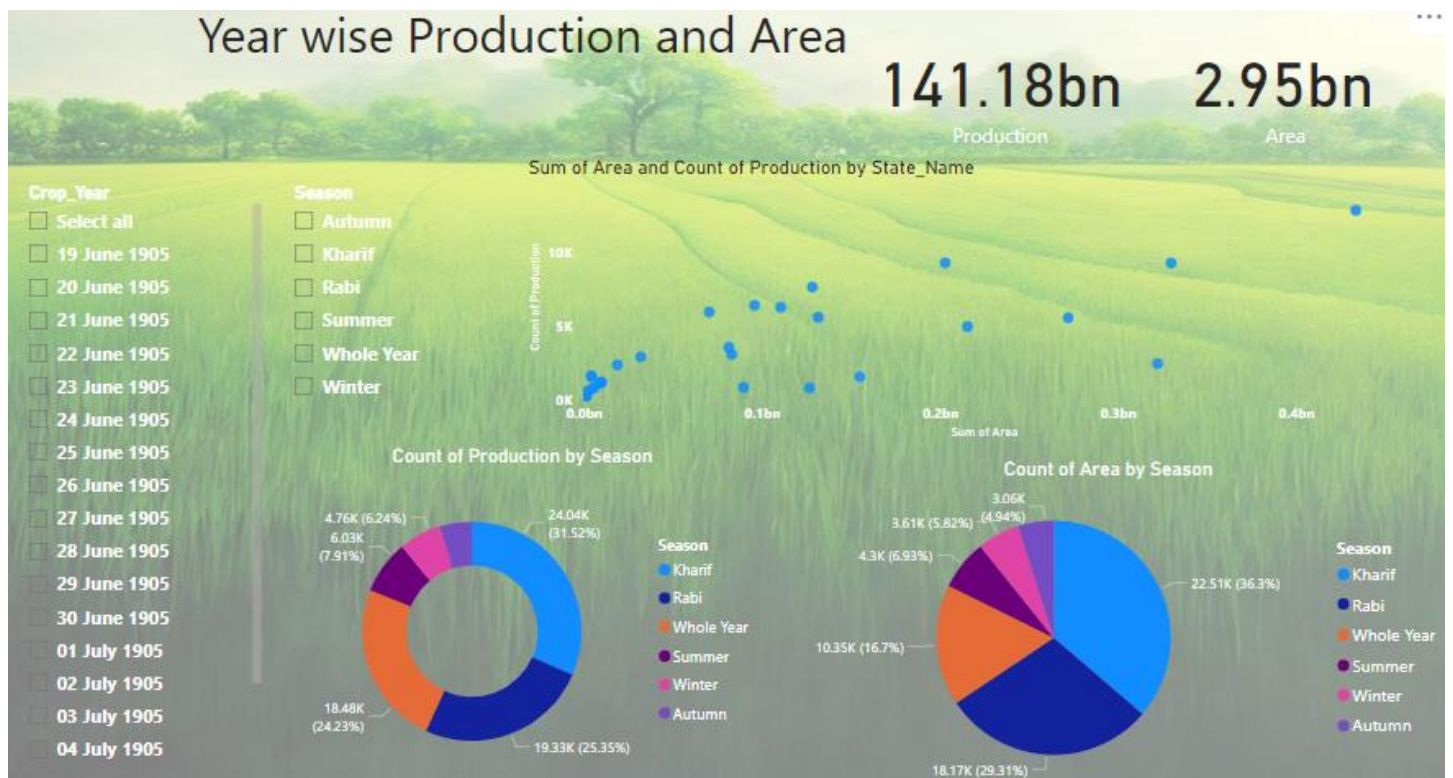Line char seen whole year season area in maximum production and also Khalif, Rabi and winter best production seen.

Season	Area	Production
Whole Year	257300466	134424837450
Kharif	1404845227	4029970243
Rabi	947987432	2051687553
Winter	219597876	434549828
Summer	75984059	170657925
Autumn	48071130	64413768

Year wise Area and Production analysis

Dataset represents data for June 1905 to July 1905 Maximum 19 June 1905 Minimum 07 July 1905 Production 83152991055 June and 58023125712.

Thank You