

**Introduction-** Based on rainfall, soil type, cropping pattern, etc. Telangana is divided into Northern, Central, and Southern Telangana Zone. Out of 55.54 lakh of land holdings 86% constitute of small and marginal land holding farmers. The average land holding of the state is 1.12 acre with Adilabad and Mahbubnagar having farm power availability as less than 2Kw/ha.

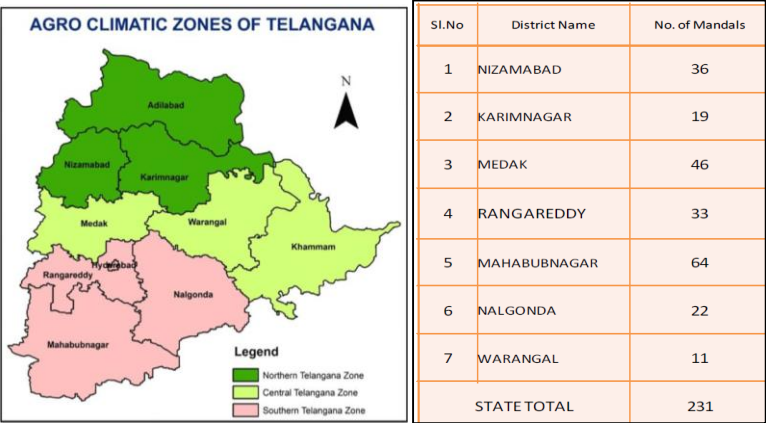


Fig.1. Agro-Climatic Zones Table.2 District wise drought affected Mandals

The rainfall in the state is erratic with 80% of rainfall being of South-West monsoon. Predominant crops in Central Zone include cotton, rice, maize, green gram, mango, sugarcane and chilies with Red type of Soils (54%). Northern Zone is dominated with red soil (45%), black soil (24%) and calcareous soil. The southern zone is also dominated with red soil, colluvial and calcareous soils.

**Methodology:** Background Study → Data Wrangling → Variables Identification → Data Analysis (Correlational and Multiple Linear Regression) → Insights & Recommendation.

## SDG-2: Zero Hunger | Precision Farming for improving yield

### State- Telangana

#### Analysis

- The correlation analysis between rainfall, humidity and temperature shows strong correlation between rainfall and humidity.

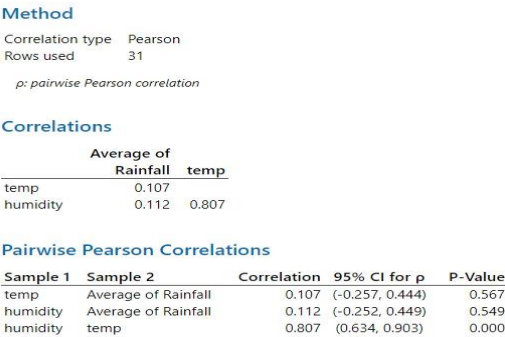


Fig. 3 Minitab Output for Correlation

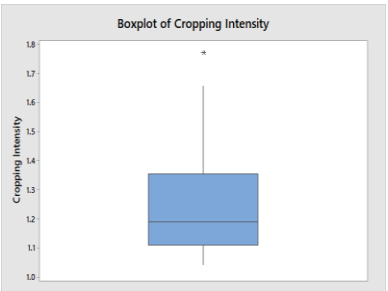


Fig. 4 Box-plot (Minitab)

The box-plot for cropping intensity shows presence of outlier in data. The fig 5 shows months of May, June, July as most engaged months for cropping.

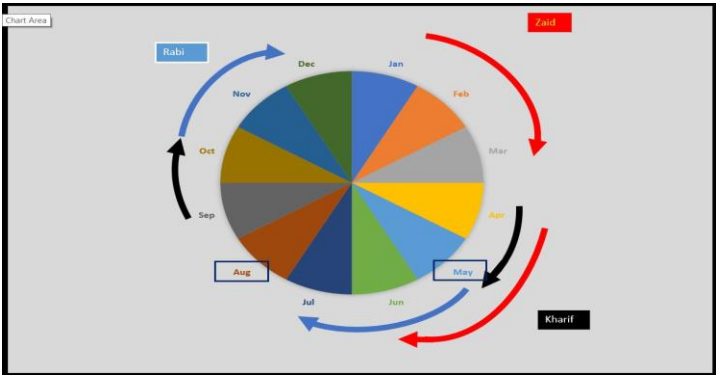


Fig. 5 Season (Black-Rabi; Red-Zaid; Blue- Kharif)

#### Insights

- Erratic rainfall is a major cause of drought, majorly due to south-west monsoon rains and districts on the west are mostly drought-affected regions.
- Farm-mechanisation in Adilabad and Mahbubnagar is least.
- Most of the farmers are small- and marginal so we need to focus on improving soil-health and irrigation facilities.

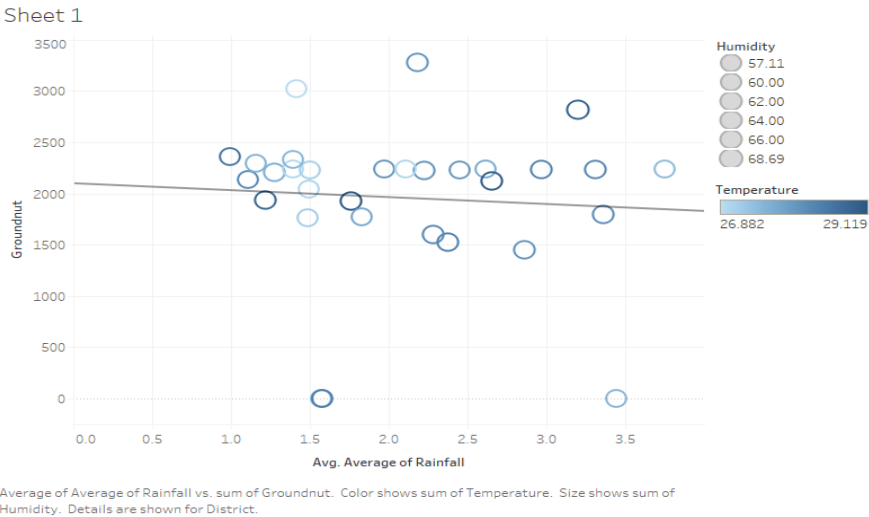


Fig. 6 Correlation bet Groundnut & Avg. Rainfall

#### References:

- Agro-climatic zone of Telangana. <https://pjtsau.edu.in/research.html>
- Agriculture at a Glance 2015-16.(2015) [https://des.telangana.gov.in/publications/Agricultural\\_at\\_glance\\_2015-16.pdf](https://des.telangana.gov.in/publications/Agricultural_at_glance_2015-16.pdf)
- Agriculture in Telangana (2015). [https://www.niti.gov.in/writereaddata/files/Telangana\\_Presentation\\_0.pdf](https://www.niti.gov.in/writereaddata/files/Telangana_Presentation_0.pdf)