Dashboard Design

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| Date | 18 August 2025 |
| Name | Mohammed Farhan |
| Project Name | India Agriculture Crop Production Analysis (1997–2021) using Tableau |
| Maximum Marks | 5 Marks |

# Dashboard Design Principles Applied

• Clear and Intuitive Layout: Dashboards are organized into National Trends, State Comparisons, and Crop Deep-Dives.

• Appropriate Visualizations: Line charts for trends, bar charts for rankings, maps for state-level yield gaps, treemaps for diversification, and decomposition charts for area vs yield effects.

• Colour and Theming: Consistent use of natural/green palettes to reflect agriculture, with distinct crop colors for clarity.

• Interactive Filters and Slicers: Filters for Year, State, Crop, and Season allow flexible exploration.

• Drill-Down Capabilities: From national to state-level, and further into crop-specific views.

• Responsive Design: Layout optimized for different screen resolutions.

• Custom Icons & Infographics: Simple crop and state icons used for easy recognition.

• Insightful Tooltips: Each visual provides extra details such as production volume, YoY growth, and rank.

# Key Outcomes from the Dashboards

1. National Production Trends: Line charts reveal steady increases in Wheat and Rice, while Pulses remain comparatively stagnant.

2. Top Producing States: Uttar Pradesh, Punjab, and Maharashtra consistently rank in the top for different crops.

3. Crop Yield Growth: Wheat and Maize show significant yield improvements, while Pulses lag behind.

4. Share of Production: Rice and Wheat together account for over 60% of India’s production in 2021.

5. Kharif vs Rabi Comparison: Clear seasonal differences highlight Rice dominance in Kharif and Wheat dominance in Rabi.

6. Yield Gaps: Several states, especially in central India, perform below the national average yield.

7. Diversification Patterns: Treemaps show states like Maharashtra and Karnataka with diverse crop portfolios, while Punjab is heavily Rice-Wheat dominated.

8. Growth Leaders: Sugarcane and Maize show the highest long-term growth rates (CAGR) from 1997–2021.

9. Volatility Analysis: Cotton production shows the highest year-to-year volatility.

10. Production Drivers: Decomposition charts highlight that yield improvement, not just area expansion, drives long-term growth in key crops.





