# Report

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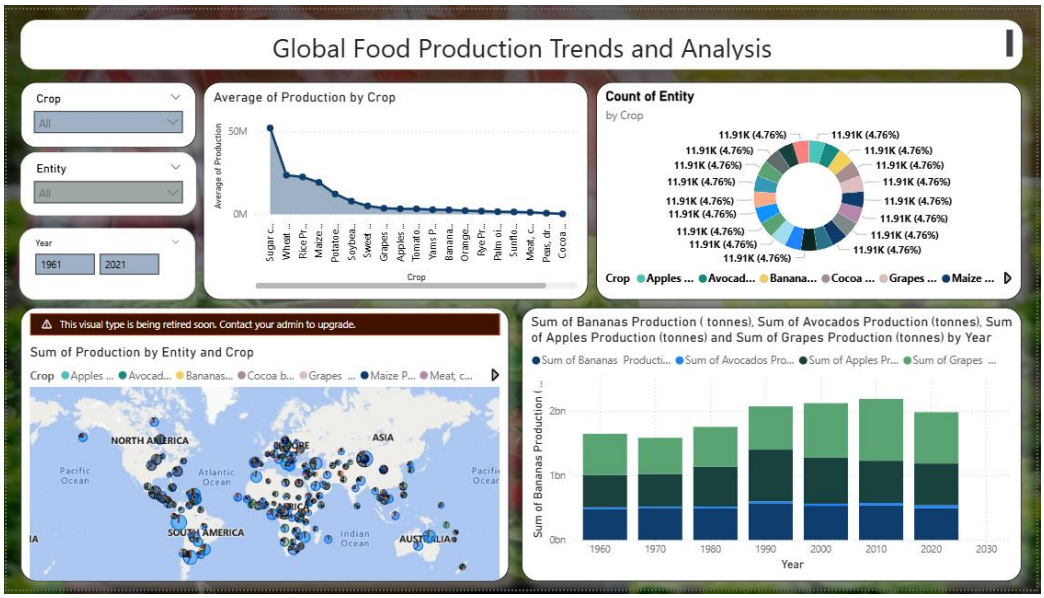
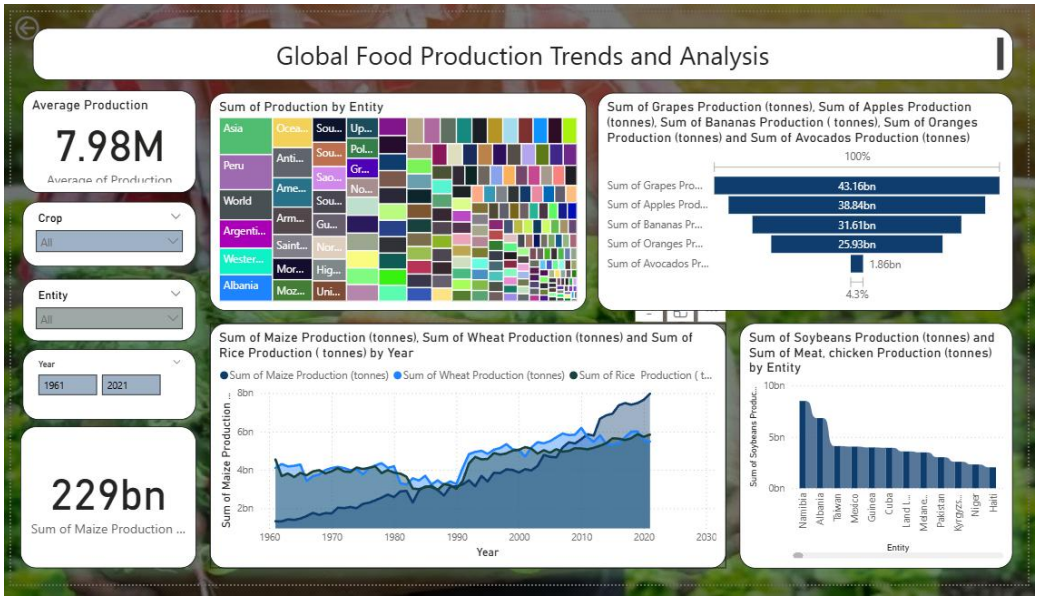
| Date | 07 OCTOBER 2025 |
| Team ID | SWUID20250213607 |
| Project Name | Global Food Production Trends and Analysis: A Comprehensive Study from 1961 to 2023 Using Power BI |
| Maximum Marks | 5 Marks |

A report is a comprehensive document that provides a detailed and structured account of data analysis, findings, and insights. It is typically used for in-depth analysis, documentation, and communication of results. Reports are suitable for a diverse audience, including decision-makers, analysts, and stakeholders who need a comprehensive understanding of the data.

Designing a report in Power BI involves connecting to data sources, creating visualizations like charts and graphs, customizing their appearance and interactivity, organizing them logically on the canvas, formatting elements for consistency and clarity, and optionally creating dashboards for a summarized view. Throughout the process, it's essential to consider the audience's needs and ensure the report effectively communicates insights from the data. Finally, iterate based on feedback to continually improve the report's design and usefulness.



Observations drawn from your Power BI global food production dashboards provide valuable insights into agricultural performance and trends:

**1. Trends Over Time**

- The production of staple crops such as maize, wheat, and rice has shown steady and significant growth from 1960 to 2021, indicating increasing global demand and advancements in farming techniques.
- Fruit crops like bananas, avocados, apples, and grapes also reveal upward production trends by decade, highlighting shifts in consumption preferences and market dynamics.

**2. Performance Comparisons**

- Asia is the top-performing region for total food production, followed by several active countries, demonstrating strong geographic specialization and leadership in crop output.
- Grapes, apples, bananas, and oranges stand out as the highest-volume fruits, allowing quick identification of major market drivers in the food supply chain.

**3. Entity and Geographic Segmentation**

- The entity distribution by crop highlights that crop cultivation is widespread globally, but certain regions (such as Asia and parts of North/South America) act as production hotspots for specific crops.
- A detailed map allows segmentation by region, entity, and crop, aiding geographic targeting for new investment or agricultural interventions.

**4. Goal Achievement and Crop Hierarchy**

- The average production per entity is around 7.98 million tonnes, with maize showing a cumulative output of 229 billion tonnes, confirming that these staple crops meet global food security targets on a large scale.
- Countries such as Namibia, Taiwan, and Turkey excel in soybeans and chicken meat production, suggesting successful specialization and potential for studying best practices.

**Insights**

1. Regional Leadership:
   Asia dominates total food crop output, marking it as a primary center for agricultural production.
2. Fruit Production Comparison:
   Grapes (43.16bn tonnes), apples (38.84bn tonnes), bananas (31.61bn tonnes), and oranges (25.93bn tonnes) are the most widely produced fruits, which can guide market and resource prioritization.
3. Staple Crop Growth:
   Maize, wheat, and rice production show consistent long-term expansion, reflecting global efforts to support population growth and food demands.
4. Entity Diversity:
   Crop and entity distribution is relatively balanced and diverse, underpinning robust global participation and risk mitigation through crop variety.
5. Production Hotspots:
   Visual clustering on the map points to concentrated regions where food production is highest, allowing policymakers to focus resource allocation and planning.

Here are tailored audience-centric insights addressing the specific pain points and needs of each user group described:

**Policymakers**

- Insight:
  Unified data visualizations identify patterns and gaps in global crop production, empowering more robust strategies to bolster food security and close regional deficits.
- Outcome:
  The dashboards overcome fragmentation, making crop and region trends accessible and comparable. This clarity helps policymakers move from frustration and uncertainty to more confident, data-driven decisions for sustainable agriculture and targeted interventions.

**Farmers**

- Insight:
  Visual analytics make it easier to see which crops and regions are most productive or vulnerable, supporting smarter decisions about what to plant, when to harvest, and where to allocate resources.
- Outcome:
  The integrated views reduce the overwhelm of interpreting aggregated data by showing year-by-year trends and anomalies, allowing farmers to better forecast production and plan with less apprehension.

**NGOs (Non-Governmental Organizations)**

- Insight:
  Dashboards provide granular, entity-specific breakdowns, enabling NGOs to efficiently target their support and resources to regions or communities with low food production, reducing the risk of inequity and inefficiency in aid distribution.
- Outcome:
  The enhanced analytics and visualization tools make it easier to recognize underperforming areas, plan interventions, and track the impact of their actions over time.