# Business Question and Visualization Report

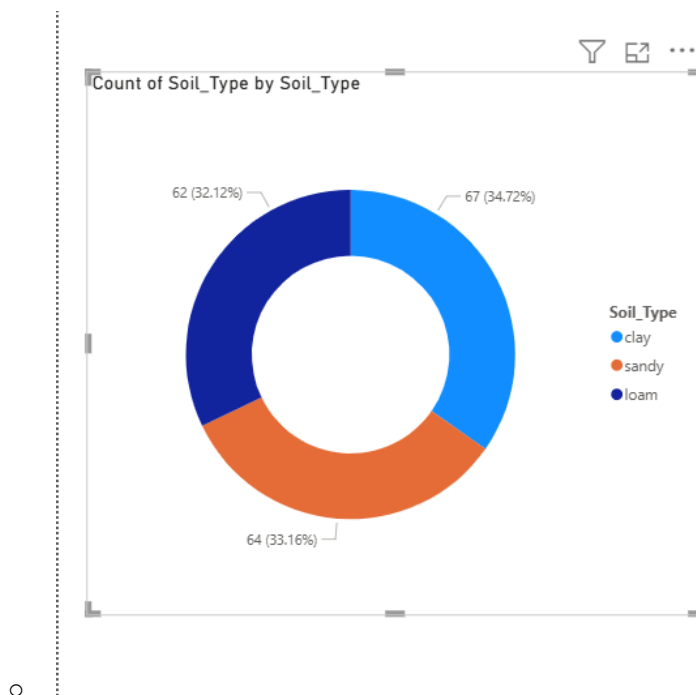| Date | 29 July 2025 |
|------|--------------|
| Team ID | Sukriti |
| Project Name | Predicting Plant Growth Stages with Environmental and Management Data Using Power BI |
| Maximum Marks | 5 Marks |

Visualization development refers to the process of creating graphical representations of data to facilitate understanding, analysis, and decision-making. The goal is to transform complex datasets into visual formats that are easy to interpret, enabling users to gain insights and make informed decisions. Visualization development involves selecting appropriate visual elements, designing layouts, and using interactive features to enhance the user experience. This process is commonly associated with data visualization tools and platforms, and it plays a crucial role in business intelligence, analytics, and reporting

**Business Questions and Visualisation**

The process involves defining specific business questions to guide the creation of meaningful and actionable visualizations in Power BI. Well-framed questions help in identifying key metrics, selecting relevant data, and building visualisation that provide insights.
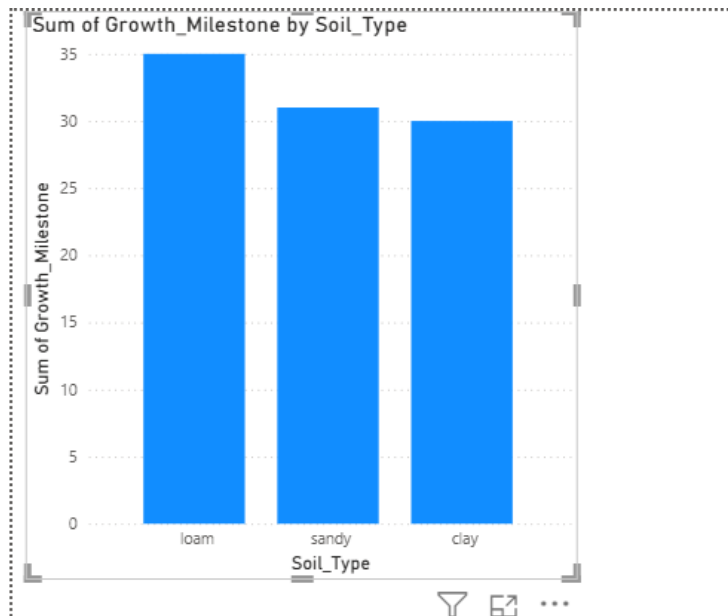
1. **Which soil type is most prevalent in the dataset?**

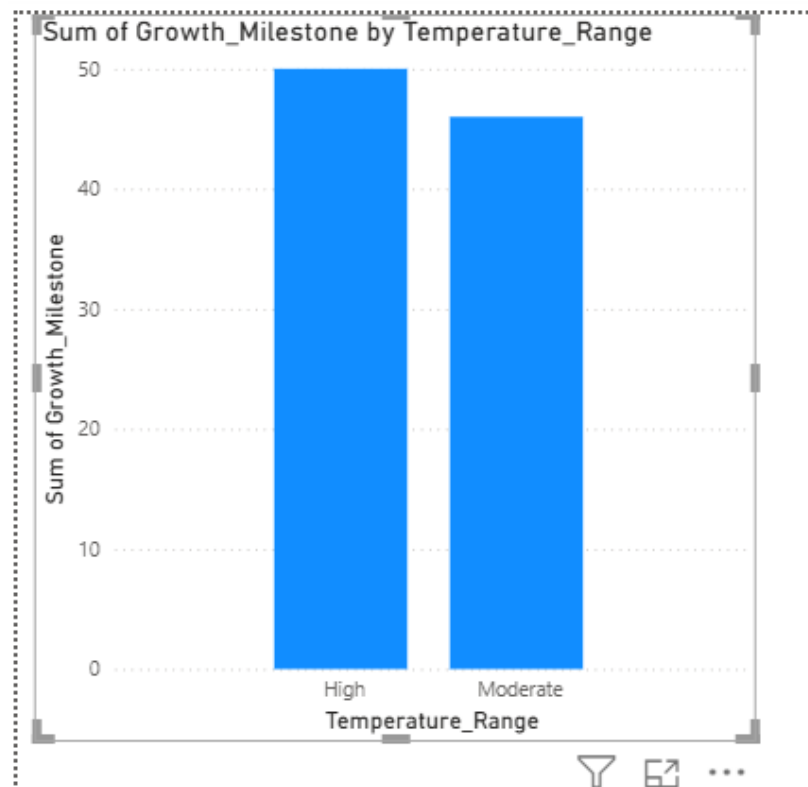    o *Visualization*:Donut Chart showing count of each Soil_Type.



Count of Soil_Type by Soil_Type

62 (32.12%)  67 (34.72%)

Soil_Type
- clay
- sandy
- loam

64 (33.16%)

    o

2. **How does soil type affect plant growth milestone?**

   o *Visualization*: Clustered Bar chart showing Sum of Growth_Milestone by Soil_Type
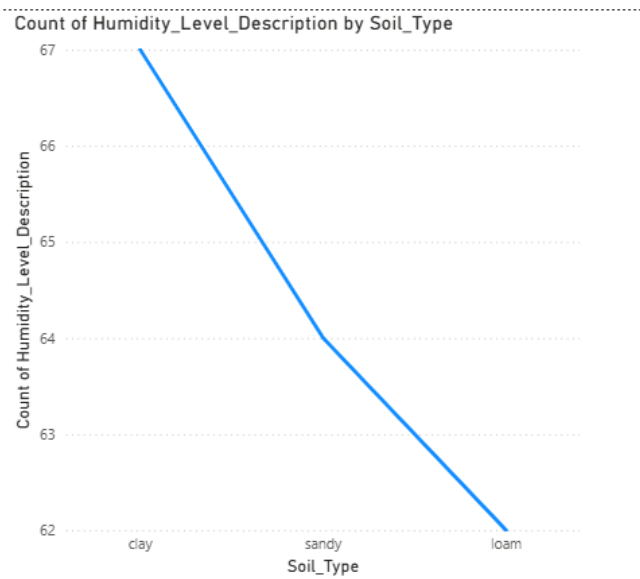


Sum of Growth_Milestone by Soil_Type

   o

3. **Which temperature range is most favorable for plant growth?**

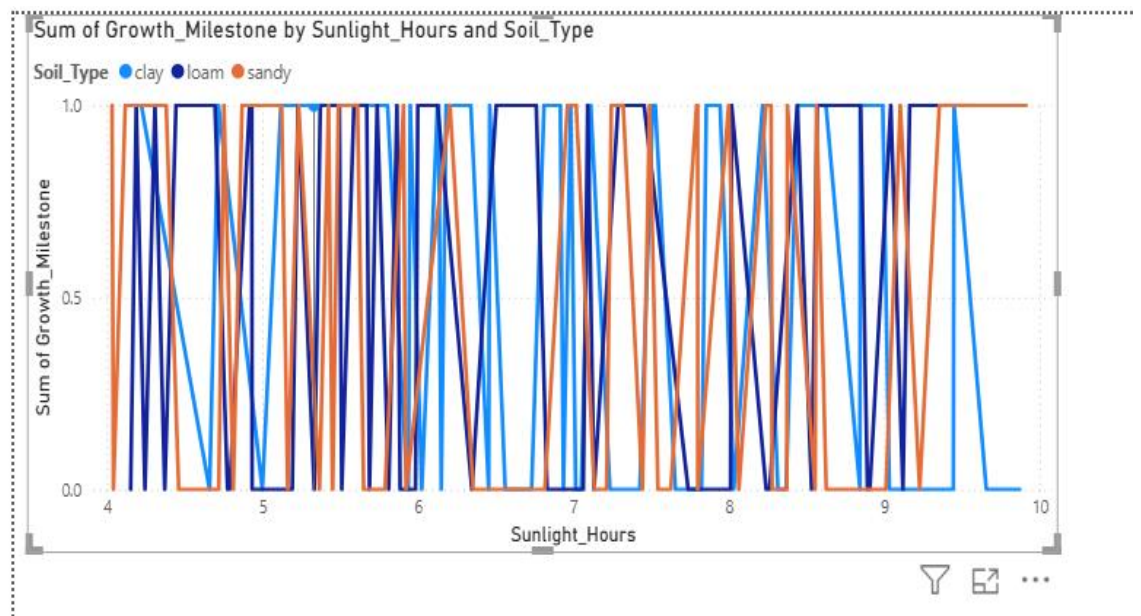   o *Visualization*:Colum Chart showing Sum of Growth_Milestone by Temperature_Range.



Sum of Growth_Milestone by Temperature_Range

   o

4. **How does humidity level vary across soil types?**

   o *Visualization*:Line Chart for Humidity_Level_Description by Soil_Type
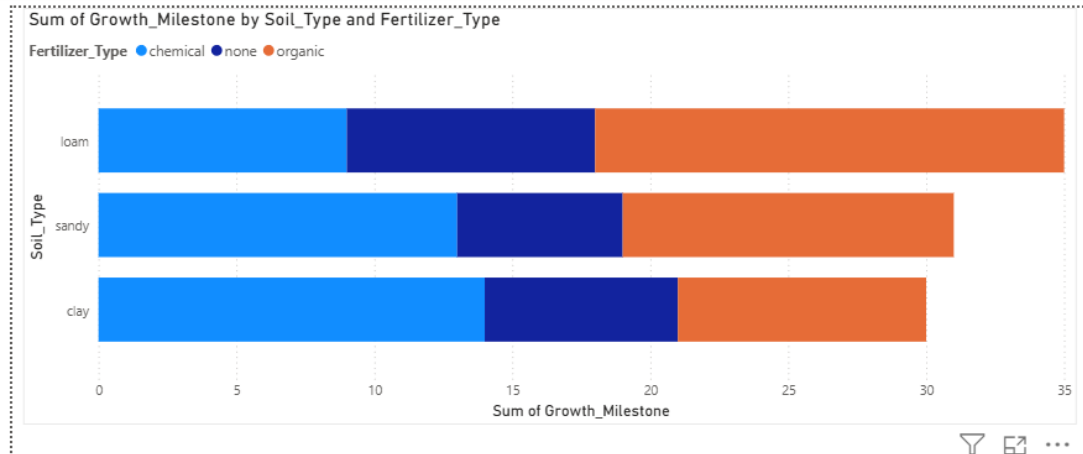


5. **What is the impact of sunlight hours on different soil types?**

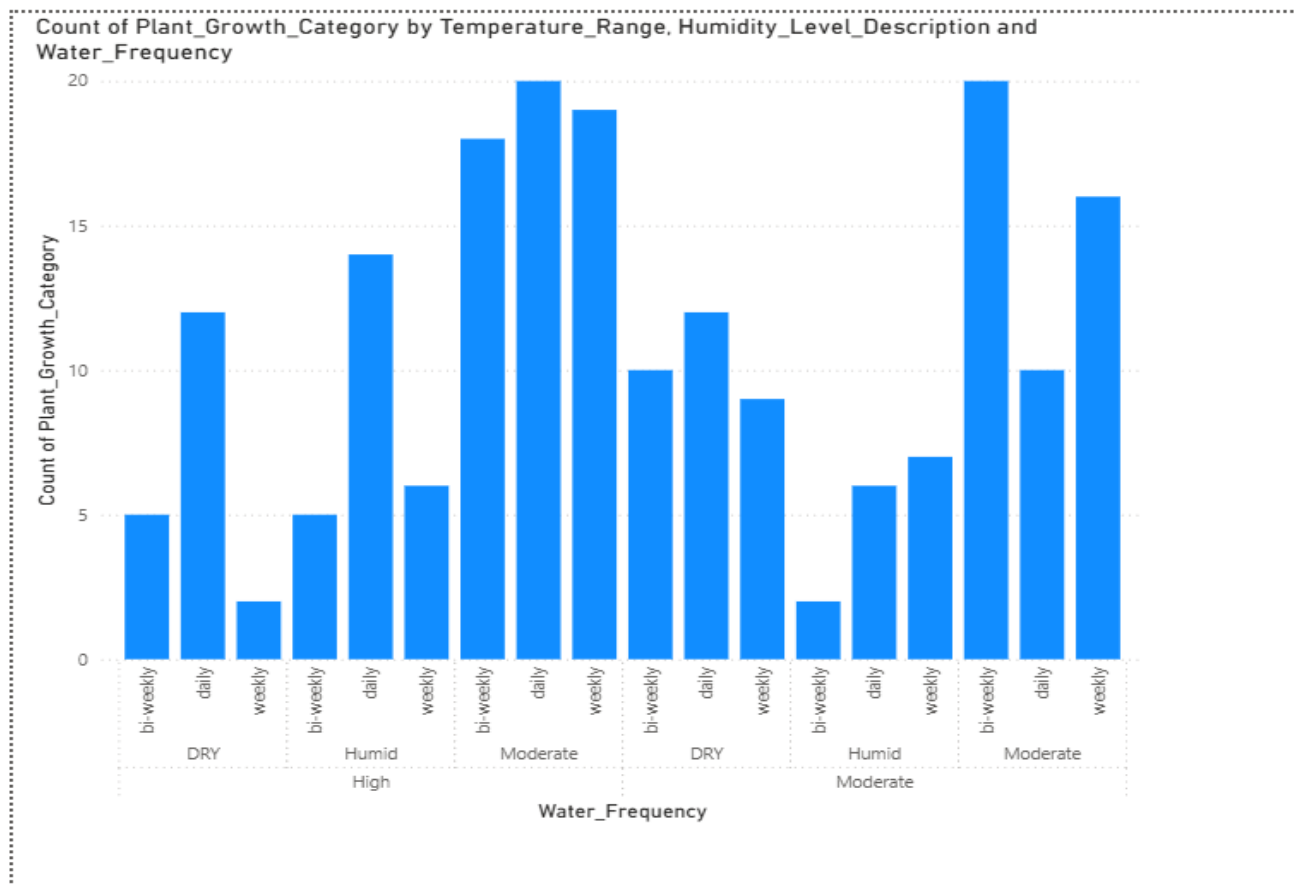   o *Visualization*:Line Chart showing Growth_Milestone by Sunlight_Hours for each Soil_Type



   o

6. **How do fertilizer types influence plant growth across soil types?**

   o *Visualization*:Stacked Bar Chart with Growth_Milestone by Fertilizer_Type and Soil_Type



7. **What is the Growth stage distribution under different environmental conditions?**

   o *Visualization*:Stacked Column Chart showing counts of Plant_Stage across Temperature_Range, Humidity_Level and Water_Frequency.

8. **Which combination of environmental factors results in the fastest growth?**

   o *Visualization*:Scatter Chart showing Growth_Milestone by Temperature, Humidity, Sunlight_Hours