

Business Questions and Developing Visualizations

➤ Core Questions Answered in Dashboard:

1. Which soil type requires the most frequent watering and how does it impact growth?
 2. What is the effect of temperature ranges on plant growth and development?
 3. How do different fertilizers and humidity levels influence plant growth milestones?
 4. Which soil type receives the most sunlight, and how does it relate to growth performance?
 5. What are the average environmental conditions (temperature, humidity, sunlight) for optimal plant growth?
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➤ Visualizations:

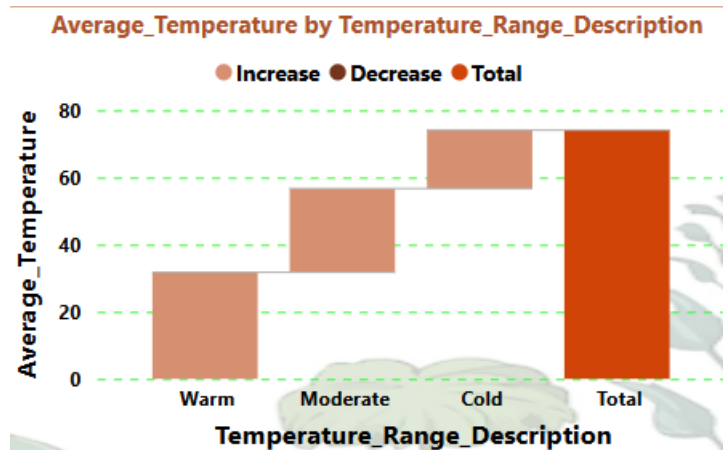
▪ Chart 1 – Water Frequency by Soil Type

Insight: Loam soil with high water frequency results in the highest total watering count, suggesting loam benefits more from frequent watering compared to sandy and clay soils.

Water Frequency according to its Soil Type			
Soil_Type	High	Moderate	Total
☐ loam	191.61	205.65	397.25
weekly	45.06	51.26	96.31
daily	64.02	54.73	118.75
bi-weekly	82.53	99.66	182.19
☐ sandy	215.43	217.46	432.88
bi-weekly	33.29	60.49	93.78
weekly	35.27	70.65	105.92
daily	146.87	86.32	233.19
☐ clay	280.24	207.13	487.37
Total	687.28	630.24	1,317.51

▪ Chart 2 – Average Temperature by Temperature Range Description

Insight: Moderate temperature ranges lead to the highest average temperatures, supporting better growth conditions.



• Chart 3 – Temperature Description vs. Plant Growth Insight:

- Cold temperatures **decrease** plant growth.
- Warm temperatures **enhance** plant growth.

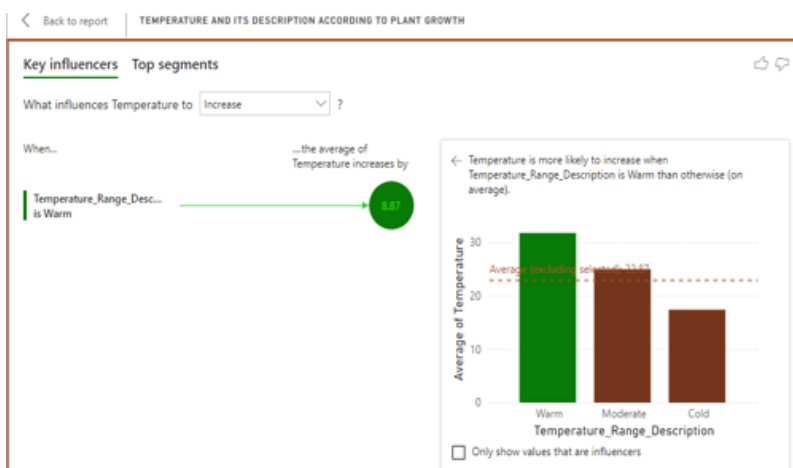
< Back to report | TEMPERATURE AND ITS DESCRIPTION ACCORDING TO PLANT GROWTH

Key influencers Top segments

What influences Temperature to ?

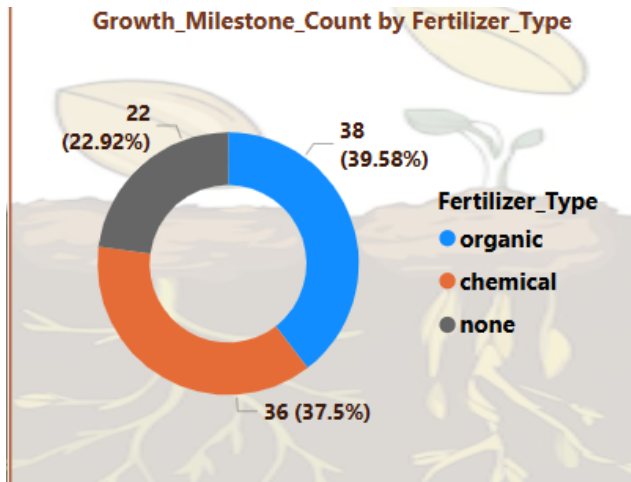
When... ..the average of
Temperature decreases by

Temperature_Range_Descr... is Cold → 9.7



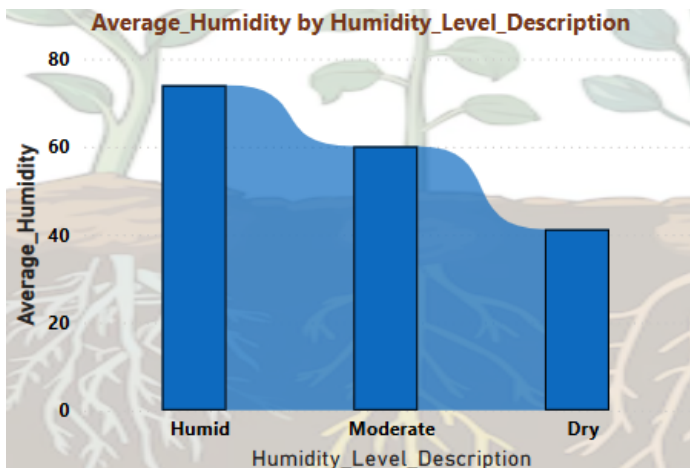
▪ **Chart 4 – Growth Milestone Count by Fertilizer Type**

Insight: Chemical fertilizers result in the **highest number** of plant growth milestones compared to organic or no fertilizer.



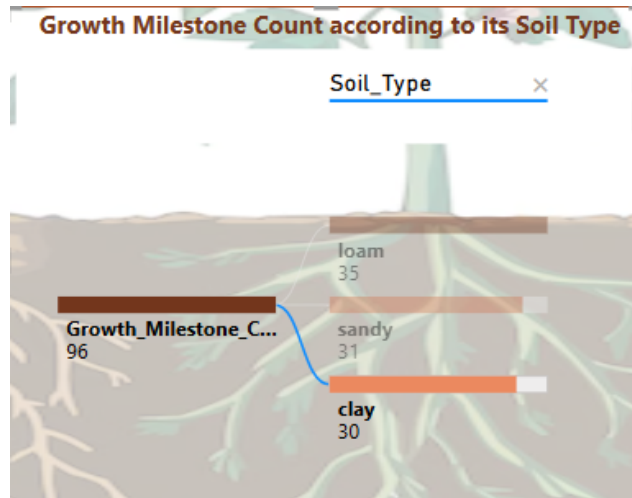
▪ **Chart 5 – Average Humidity by Humidity Level Description**

Insight: Humid conditions show the highest average humidity, crucial for maintaining optimal plant growth.



▪ **Chart 6 – Growth Milestone Count by Soil Type**

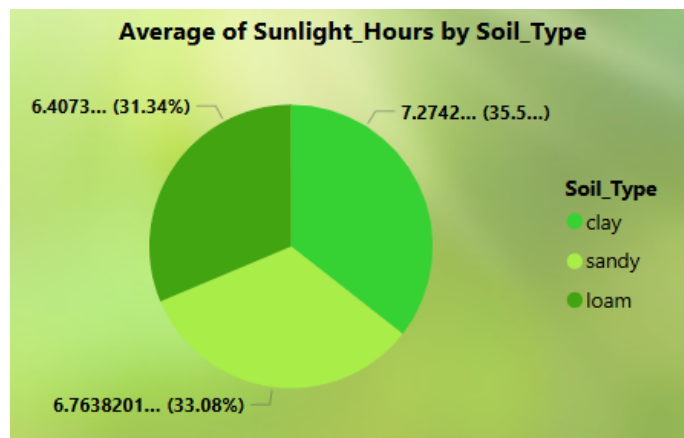
Insight: Loam soil supports the **highest growth milestone count**, making it the most favorable soil type among the three.



▪ **Chart 7 – Average Sunlight Hours by Soil Type**

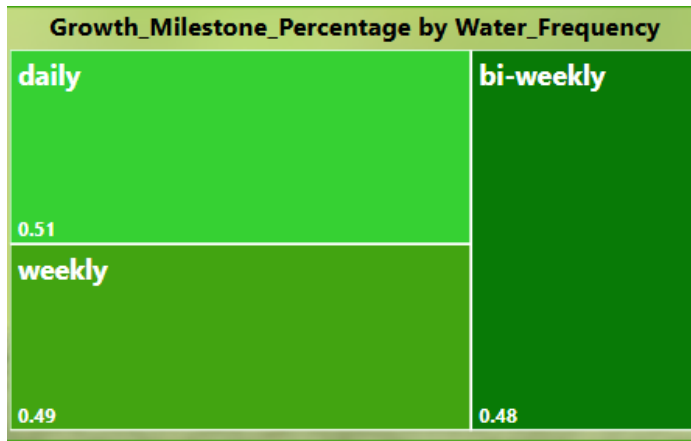
Type: Column Chart

Insight: Sandy soil receives the **highest average sunlight hours**, which may contribute to good growth under sufficient light.



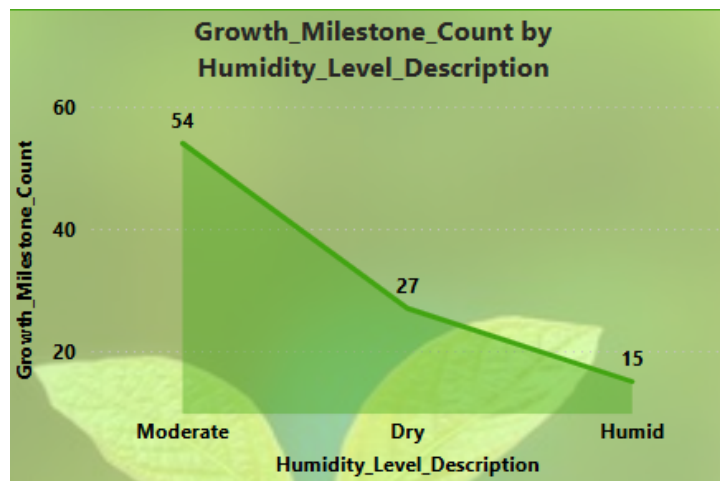
▪ **Chart 8 – Growth Milestone Percentage by Watering Frequency**

Insight: **Daily watering** results in the highest percentage of growth milestones, emphasizing the importance of consistent irrigation.



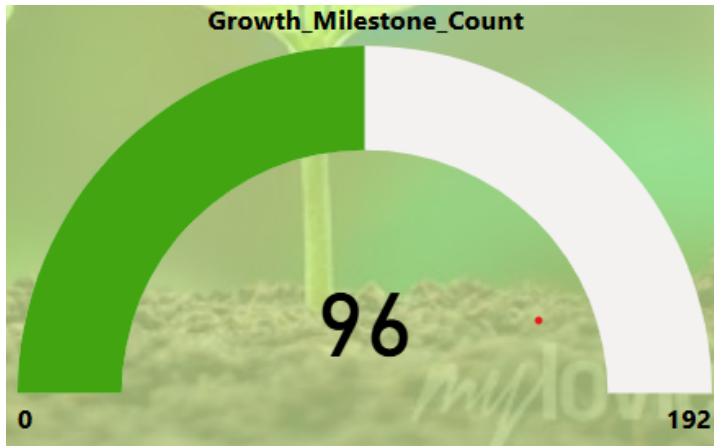
▪ **Chart 9 – Growth Milestone Count by Humidity Level**

Insight: Humid conditions lead to the highest growth milestone count, reinforcing the importance of high humidity.



▪ **Chart 10 – Total Growth Milestone Count**

Insight: The total growth milestone count is 96, mostly contributed by environments with optimal humidity and temperature.



▪ **Chart 11 – Combined KPIs: Average Humidity, Temperature, and Sunlight Hours**

Insight: Displays the average **humidity**, **temperature**, and **sunlight hours** across all records to summarize ideal environmental conditions for growth.

