



WEATHER DATA COLLECTED DURING THE 2024 SUMMER
SEASON AT GITEGA METEOROLOGICAL STATION.



PREPARED BY DATA OBSERVATION GITEGA TEAM.

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CHAPTER 1: WEATHER DATA FOR SUMMER 2024.

This chapter provides an overview of the observed data, emphasizes the key findings, and illustrates the weather patterns for Summer of 2024(June,July,August).

1.1. MAXIMUM AND MINIMUM TEMPERATURE AND RAINFALL.

Maximum and Minimum temperature and total rainfall of Summer 2024 are summarized in Table 1.1.

| | | |
|---------------------|---------------------|----------------|
| Maximum temperature | Minimum temperature | Total rainfall |
| 28.0 ⁰ C | 17.6 ⁰ C | 49.6 mm |

Table 1.1:Temperature and Total Rainfall.

1.2. OTHER SIGNIFICANT DATA

| PARAMETER | VALUE | DAY |
|-----------------------------------|---------------------|--|
| Highest Maximum temperature | 30.6 ⁰ C | 28/08/2024 |
| Lowest Maximum temperature | 24.3 ⁰ C | 22/08/2024 |
| Highest Minimum temperature | 21.1 ⁰ C | 22 nd ,07,2024 |
| Lowest Minimum temperature | 13.7 ⁰ C | 26 th ,06,2024 |
| Highest Rainfall | 16,7 mm | 11/08/224 |
| Highest minimum Grass temperature | 18.4 ⁰ C | 10/08/2024 |
| Lowest Minimum Grass temperature | 10.2 ⁰ C | 26 th ,06,2024. |
| Highest Insolation | 9 Hours 36min | 12 nd ,07,2024. |
| Lowest Insolation | 12 min | 12 nd ,06,2024. |
| Highest Piche evaporation | 8.8 mm | 6/08/2024 |
| Lowest Piche evaporation | 2.9 mm | 16/08/2024 |
| Highest BAC evaporation | 5.9 mm | 05/08/204 |
| Highest BAC evaporation | 5.9 mm | 05/08/204 and 20 th ,07,2024. |

Table 1.2:Summary of Maximum and Minimum Observed Data.

1.3. SOIL TEMPERATURES

Table 1.3 summarizes the average temperatures recorded by various soil thermometers at 6:00 AM, 12:00 PM, and 6:00 PM.

| HEIGHT | 06:00 | 12:00 | 18:00 |
|--------|-------|-------|-------|
| 10Cm | 22.7 | 24.1 | 25.4 |
| 20Cm | 23.7 | 23.8 | 24.8 |
| 50Cm | 24.7 | 24.7 | 24.6 |
| 100Cm | 24.6 | 24.6 | 24.6 |

Table 1.3:The Mean temperature of Soil thermometers.

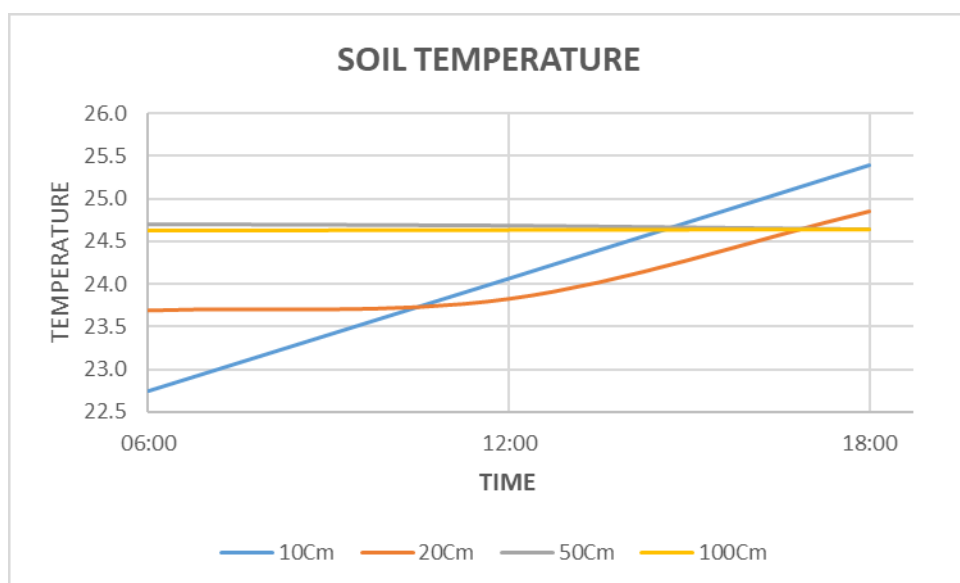


Figure 1.1: Variation of Soil temperature during a day.

1.4. PICHE AND BAC EVAPORATION

Table 1.4 displays the average evaporation rates at Piche and BAC. The data indicates that piche experiences higher evaporation rates than Bac.

| EVAPORATION TIME | PICHE | BAC |
|------------------|-------|-----|
| 18H00-06H00 | 2.1 | 1.7 |
| 08H00-08H00 | 5.6 | 3.7 |
| 06H00-18H00 | 3.4 | 2.7 |

Table 1.4: BAC and Piche Evaporation.

1.5. INSOLATION

Table 1.5 summarizes the recorded insolation for the month of Summer.

| | AM | PM | TOTAL |
|---------|------------------|-----------|-----------------|
| TOTAL | 313 hours 54 min | 298 hours | 611hours 54 min |
| AVERAGE | 3h 24min | 3h 14min | 6 hours 38min |

Table 1.5: Insolation.



CHAPTER 2: MONTHLY DATA COMPARISON

2.1. MAXIMUM TEMPERATURE

Minimum temperature are recorded in June While Maximum temperature is recorded in August during the summer season of 2024.

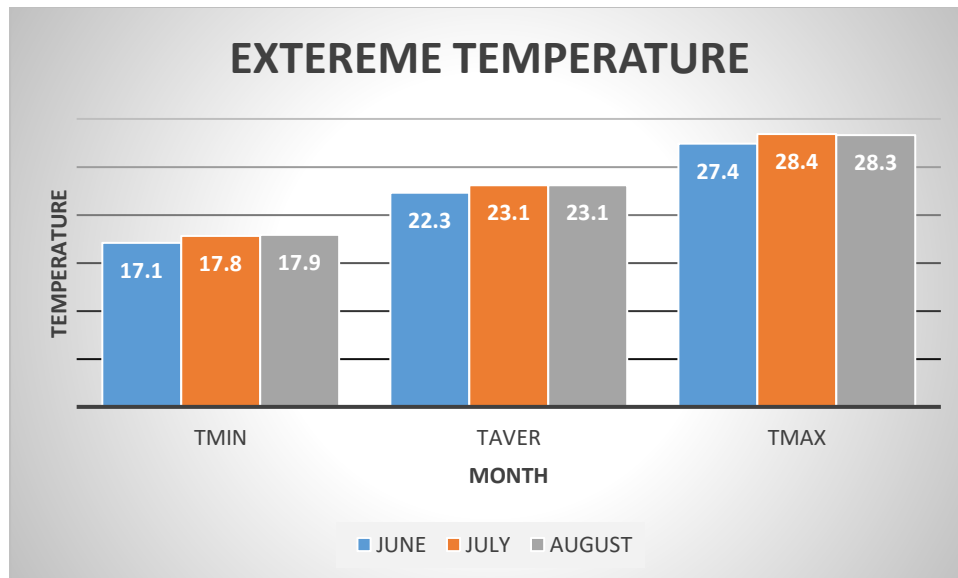


Figure 2.1:Monthly Extreme temperatures.

2.2. MONTHLY RAINFALL

No rainfall was recorded in July, while June had a minimal amount of 0.6 mm. In August, 49 mm of rain was recorded.

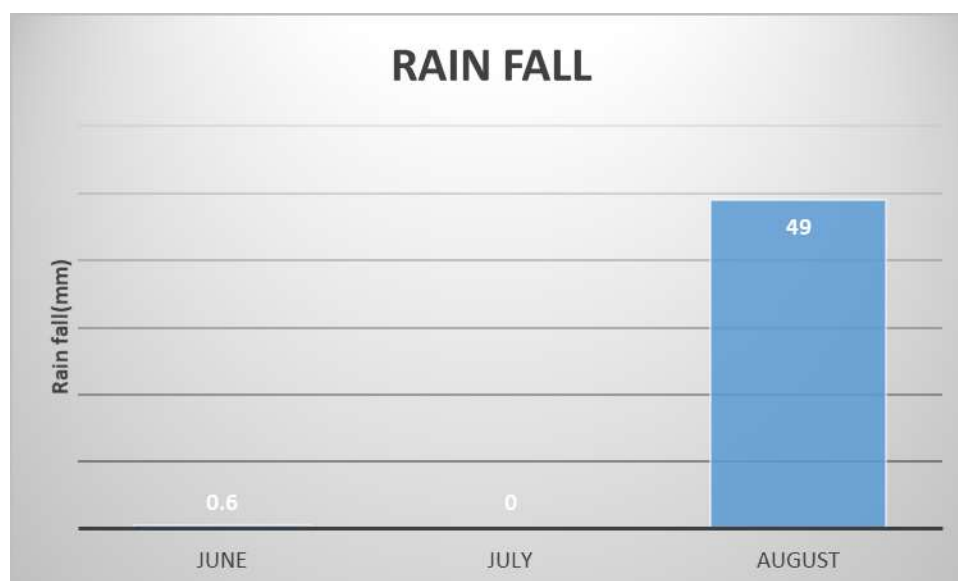


Figure 2.2:Monhly rainfall



2.3. AVERAGE SOIL TEMPERATURE AT 12:00PM

Soil experience high temperature in July and lowest temperature in June.

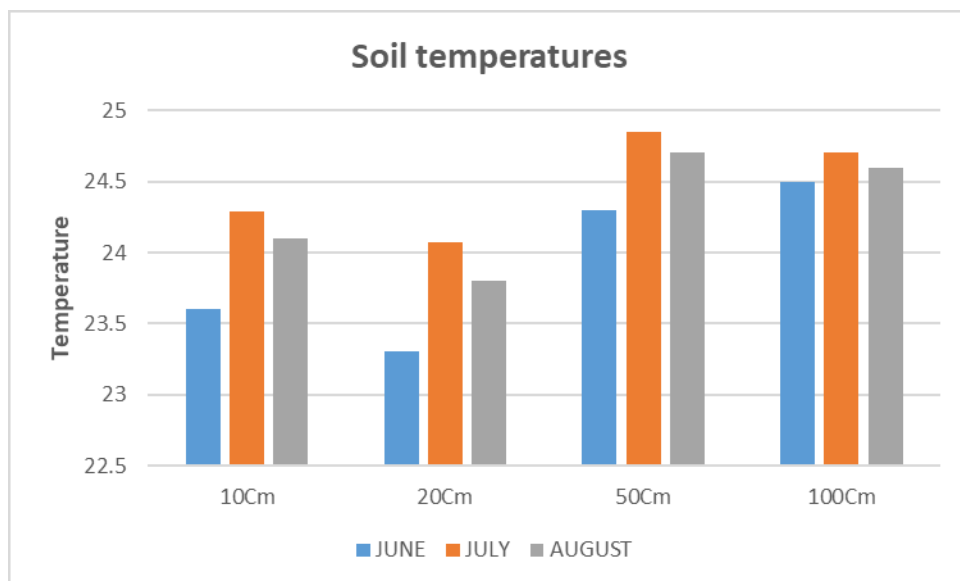


Figure 2.3: Average soil temperatures at 12:00 PM.

2.4. AVERAGE DAILY BAC AND PICHE EVAPORATION

Higher Bac and piche evaporation is observed in July and August while low evaporation is observed in June.

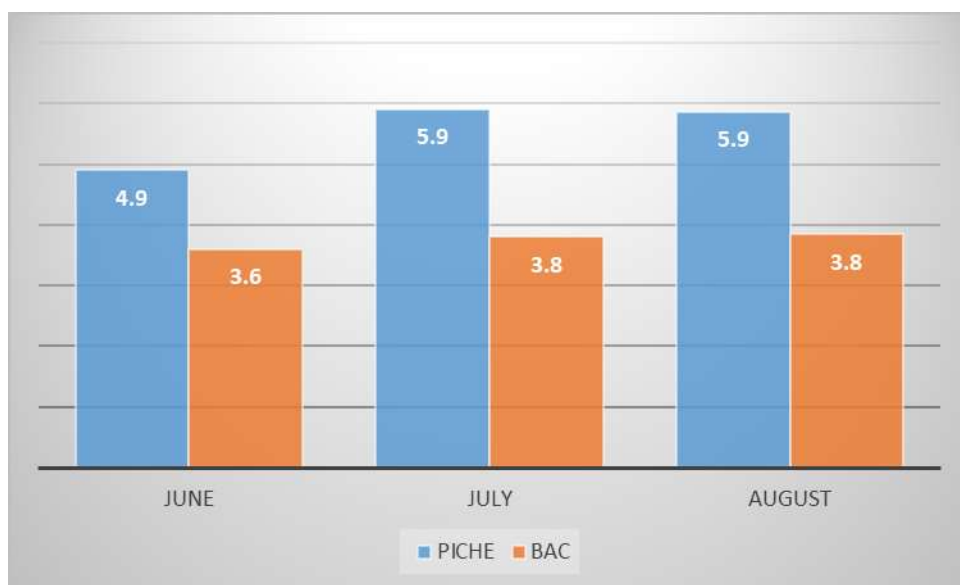


Figure 2.4: Average daily Bac and Piche evaporation



2.5. MONTHLY INSOLATION

June recorded higher sunshine, whereas July had lower sunshine levels.

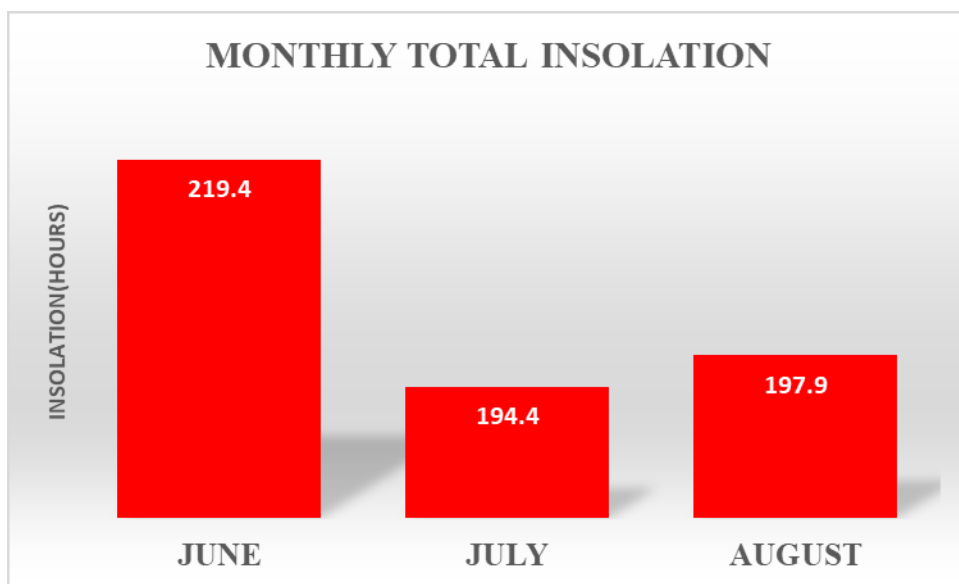


Figure 2.5:Monthly Insolation