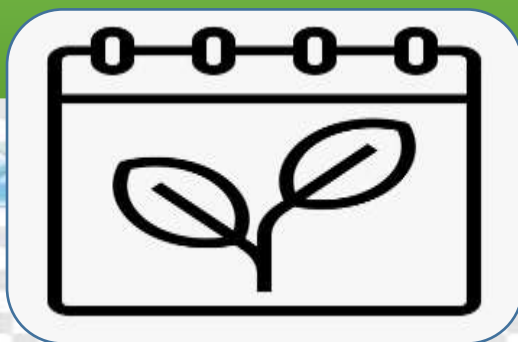




WEATHER DATA COLLECTED DURING THE 2024 SPRING
SEASON AT GITEGA AGROSYNOPTIC WEATHER STATION.



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CHAPTER 1: WEATHER DATA FOR SPRING 2024.

This chapter provides an overview of the observed data, emphasizes the key findings, and illustrates the weather patterns for Spring of 2024(March, April and May).

1.1. MAXIMUM AND MINIMUM TEMPERATURE AND RAINFALL.

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

Maximum temperature	Minimum temperature	Total rainfall
31.8 ⁰ C	15.3 ⁰ C	501.7 mm

Table 1.1:Temperature and Total Rainfall.

1.2. OTHER SIGNIFICANT DATA

PARAMETER	VALUE	DAY
Highest Maximum temperature	31.8 ⁰ C	19 th ,03,2024
Lowest Maximum temperature	21.7 ⁰ C	14 th ,04,2024
Highest Minimum temperature	20.3 ⁰ C	6 st ,05,2024
Lowest Minimum temperature	15.3 ⁰ C	6 th ,03,2024
Highest Rainfall	47.6 mm	21 th ,04,2024
Highest Minimum Grass temperature	19.8 ⁰ C	6 st ,05,2024
Lowest Minimum Grass temperature	14.4 ⁰ C	7 th and 8 th ,03,2024.
Highest Insolation	9 Hours 30 min	25 th ,05,2024.
Lowest Insolation	0 hours	13 rd ,04,2024.
Highest Piche evaporation	5.6 mm	17 th ,03,2024
Lowest Piche evaporation	0.7 mm	1 st ,04,2024.
Highest BAC evaporation	7.5 mm	31 th ,05,2024.
Lowest BAC evaporation	0.5 mm	10 th ,05,2024.

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	23.1	23.9	24.9
20Cm	23.7	23.8	24.5
50Cm	24.5	24.5	24.4
100Cm	24.5	24.5	24.5

Table 1.3:The Mean temperature of Soil thermometers.

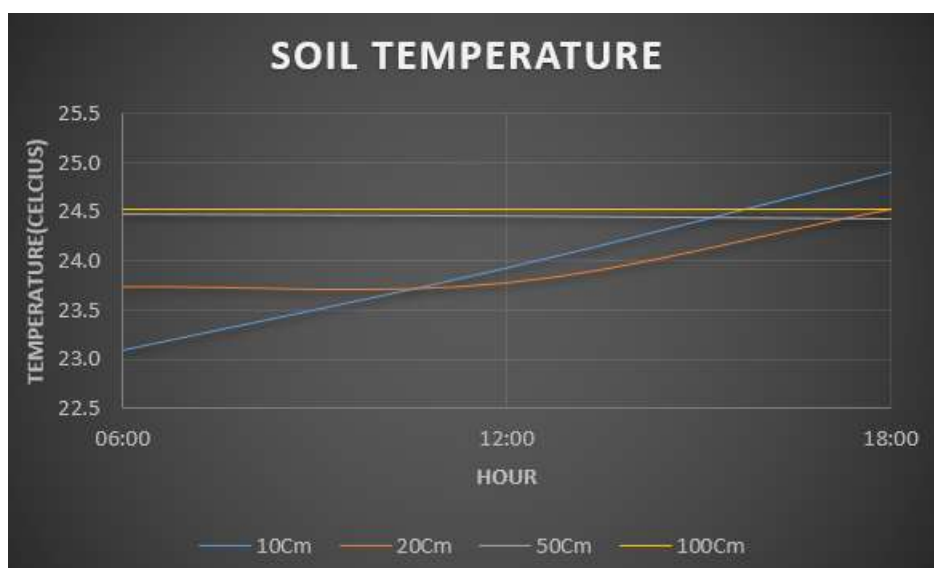


Figure 1.1: Variation of Soil temperature during a day.

1.4. PICHE AND BAC EVAPORATION

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

EVAPORATION TIME	PICHE	BAC
18H00-06H00	1.3 mm	1.3 mm
08H00-08H00	2.9 mm	2.8 mm
06H00-18H00	1.5 mm	1.4 mm

Table 1.4: BAC and Piche Evaporation.

1.5. INSOLATION

Table 1.6 summarizes the recorded insolation for the month of April.

	AM	PM	TOTAL
TOTAL	201 hours 6 min	242 hours 36 min	243hours 42 min
AVERAGE	2h 11min	2h 38min	4 hours 49min

Table 1.5: Insolation.



CHAPTER 2: MONTHLY DATA COMPARISON

2.1. MAXIMUM TEMPERATURE

Both maximum and minimum temperature are recorded in March during spring season of 2024.

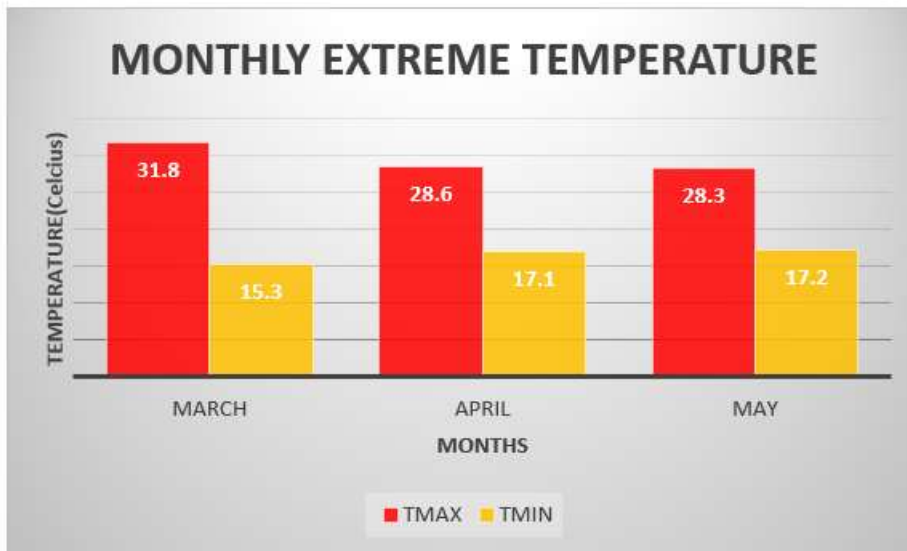


Figure 2.1: Monthly Extreme temperatures.

2.2. MONTHLY RAINFALL

April Experiences high rainfall than March and May during spring season of 2024.



Figure 2.2: Monthly rainfall



2.3. AVERAGE SOIL TEMPERATURE AT 12:00PM

Soil experience high temperature in March and lowest temperature in April.

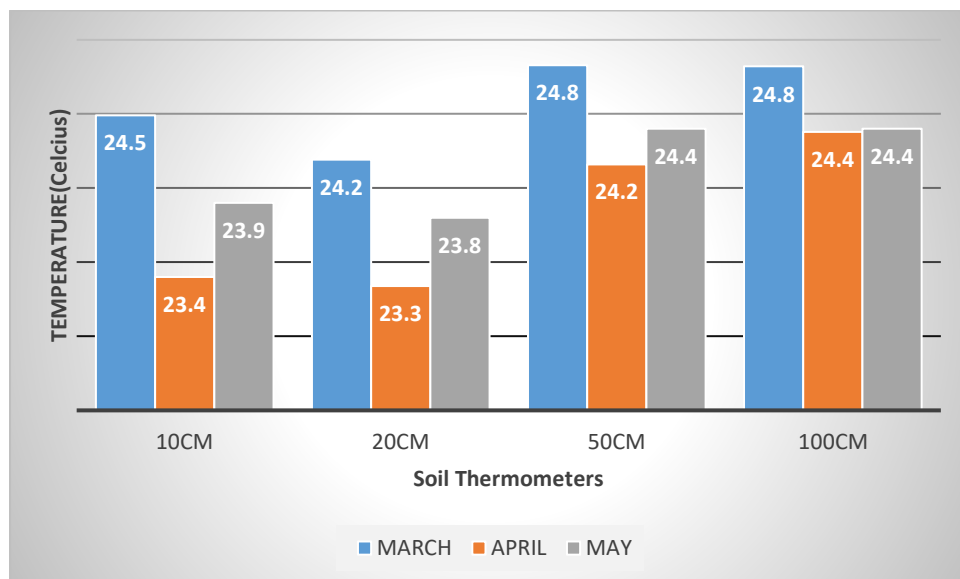


Figure 2.3: Average soil temperatures at 12:00 PM.

2.4. AVERAGE DAILY BAC AND PICHE EVAPORATION

Higher Bac and piche evaporation is observed in May while low evaporation is observed in April.

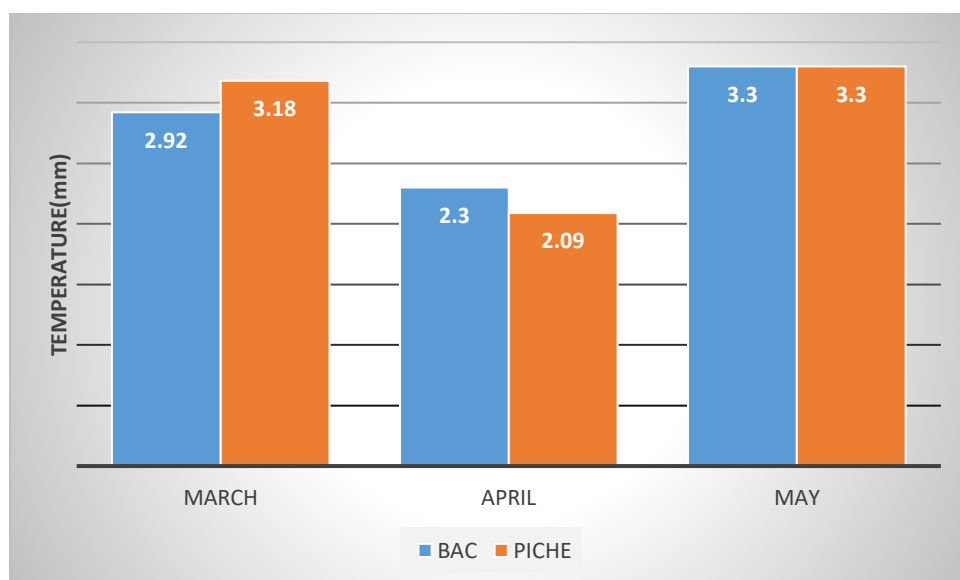


Figure 2.4: Average daily Bac and Piche evaporation



2.5. MONTHLY INSOLATION

Higher sunshine is recorded in May while lower sunshine is recorded in April.

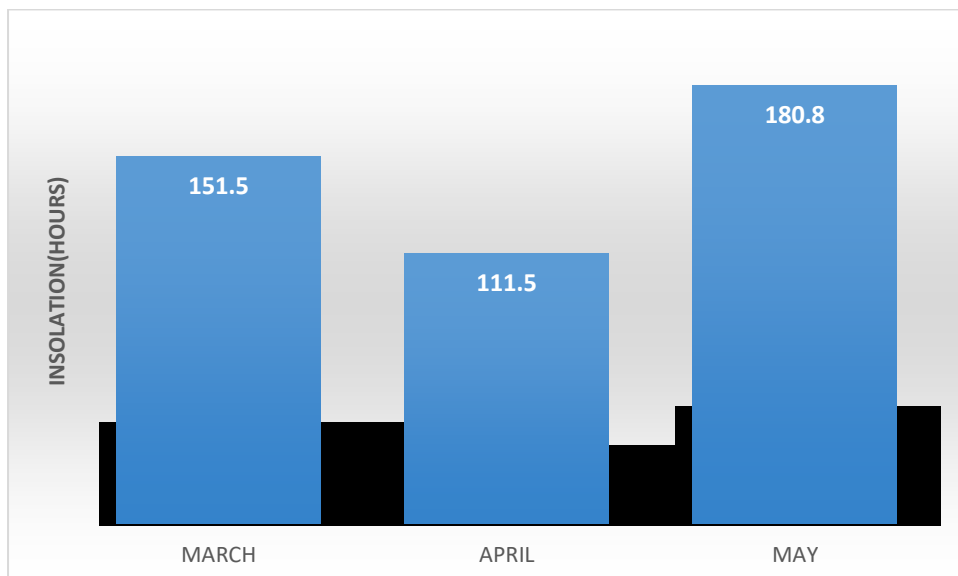


Figure 2.5: Monthly Insolation