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

SECOND MONTH

PREPARED BY DATA OBSERVATION GITEGA TEAM.

1. **BIKORIMANA CHRISTIAN**
2. **HABIMANA PASCAL**
3. **MUNYESHYAKA LEONARD**
4. **MUREBWAYIRE UYIZERA MACRINE**
5. **UWERA ALINE**

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CHAPTER 1: WEATHER DATA FOR THE MONTH OF APRIL

This chapter provides an overview of the observed data, emphasizes the key findings, and illustrates the weather patterns for the month of May,2024.

1.1. MAXIMUM AND MINIMUM TEMPERATURE AND RAINFALL.

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

Maximum temperature	Minimum temperature	Total rainfall
28.3^{0}C	17.2^{0}C	123.1 mm

Table 1.1:Temperature and Total Rainfall.

1.2. OTHER SIGNIFICANT DATA

PARAMETER	VALUE	DAY
Highest Maximum temperature	28.3^{0}C	On 12th ,05,2024
Lowest Maximum temperature	24.5^{0}C	On 8th ,05,2024
Highest Minimum temperature	20.3^{0}C	On 6st,05,2024
Lowest Minimum temperature	17.2^{0}C	On 25th ,05,2024
Highest Rainfall	35.3 mm	8th ,05,2024
Hightest Minimum Grass temperature	19.8^{0}C	On 6st,05,2024
Lowest Minimum Grass temperature	15.4^{0}C	On 25th ,05,2024.
Highest Insolation	9.5 Hours	25th ,05,2024.
Lowest Insolation	0.8 hour	8th ,05,2024.
Highest Piche evaporation	5 mm	21st ,04,2024
Lowest Piche evaporation	1 mm	8th ,05,2024.
Highest BAC evaporation	7.5 mm	31th ,05,2024.
Lowest BAC evaporation	1.4 mm	31th ,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	23.0^{0}C	23.9^{0}C	24.9^{0}C
20Cm	23.6^{0}C	23.8^{0}C	24.5^{0}C
50Cm	24.4^{0}C	24.4^{0}C	24.3^{0}C
100Cm	24.4^{0}C	24.4^{0}C	24.4^{0}C

Table 1.3:The Mean temperature of Soil thermometers.

Figure 1.1 shows soil tempearature variation dring day hours.

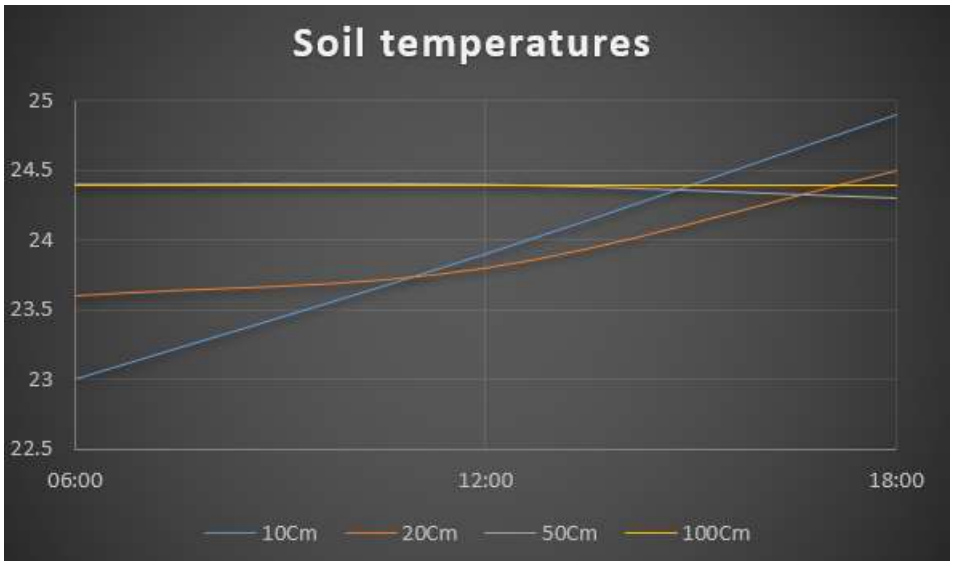

Figure 1.1: Variation of Soil temperature during a day.

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	2.2 mm	1.6 mm
08H00-08H00	3.3 mm	3.3mm
06H00-18H00	1.1 mm	1.3 mm

Table 1.4: BAC and Piche Evaporation.

1.5. MINIMUM GRASS AND MINIMUM DAILY TEMPERATURE.

The data indicates that the mean average temperature of the glass is 0.4°C lower than the daily minimum temperature, as presented in Table 1.5.

MINIMUM GLASS TEMPERATURE	MINIMUM DAILY TEMPERATURE
19.4^0C	19.8^0C

Table 1.5: Grass and Daily Minimum temperatures.

1.6. INSOLATION

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

	AM	PM	TOTAL
TOTAL	47 hours	64 hours 30 min	111 hours 30 min
AVERAGE	1h 34min	2hours 9min	3 hours 43min

Table 1.6: Insolation.

1.7. CLOUDS AND INSOLATION

In April mostlty days were characterized by abundant clouds.

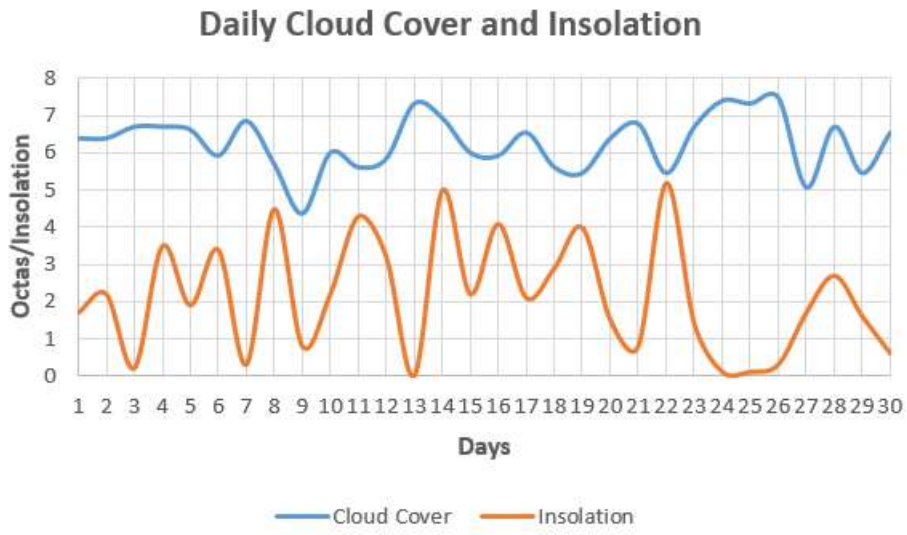

Figure 1.2:Daily Average Clouds cover.

1.8. CLOUDS DEVELOPMENT

Throughout the observation period, data indicates that there is a higher prevalence of clouds between 06:00 and 12:00, with more abundant cloud cover in the morning than afternoon.

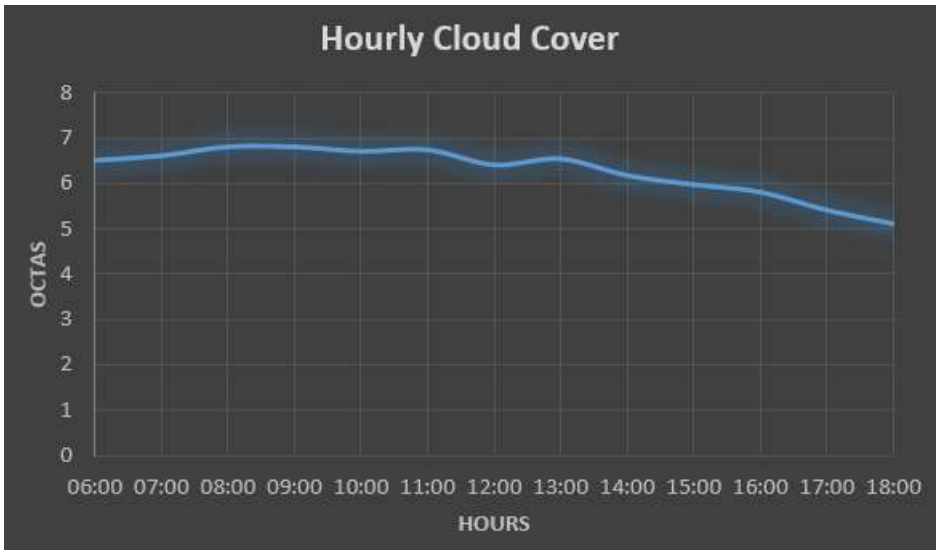

Figure 1.3: **Hourly Average Clouds cover.**

1.9. INSTRUMENTS

1.9.1. DIGITAL THERMOMETER VS THERMOGRAPHY

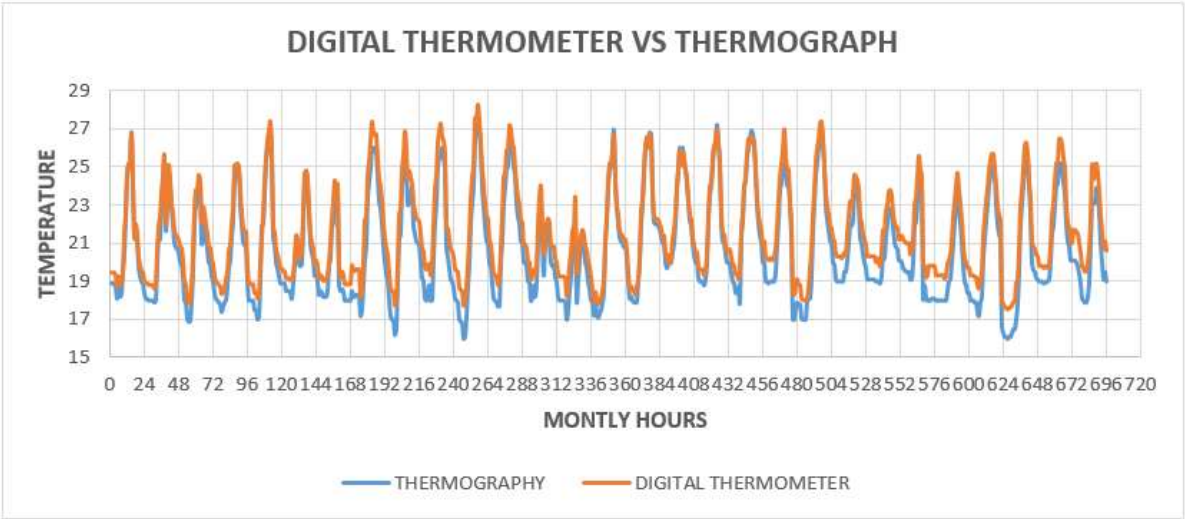

Figure 1.4: **Thermography and Digital Thermometer.**

1.9.2. DIGITAL HYGROMETER VS HYGROGRAPHY

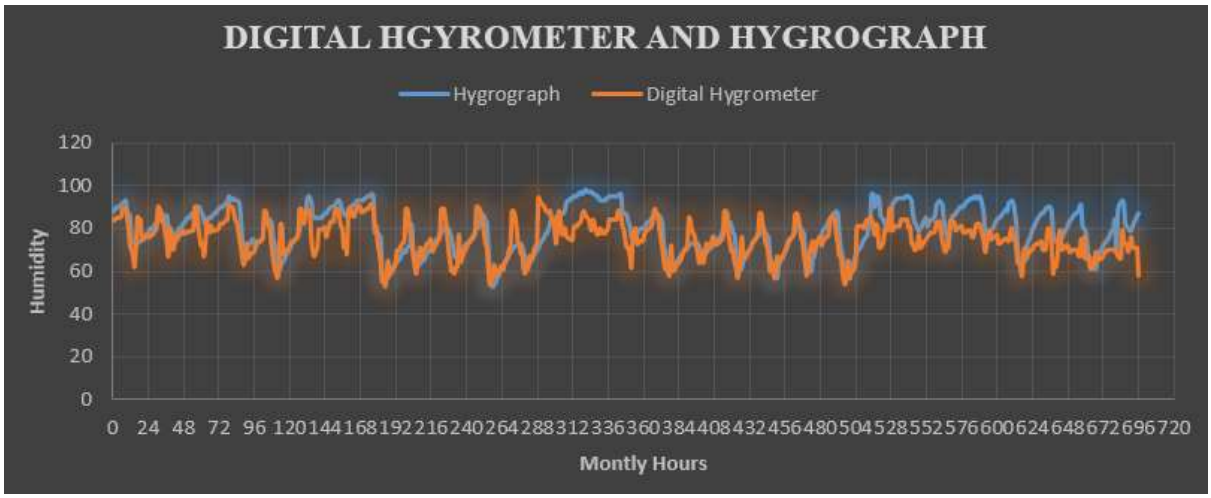

Figure 1.5: **Digital Hgrometer and Hygrography.**