



Government of Malawi
Ministry of Natural Resources, Energy and Mining

Malawi 10-day Weather and Agrometeorological Bulletin

"In support of National Early Warning Systems and Food Security"



Be wise be weather-wise
Department of Climate Change and Meteorological Services

Period: 21 – 31 October 2019

Season: 2019/2020

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HIGHLIGHTS

- Isolated rainfall and extreme hot temperatures experienced over Malawi ...
- Land preparation remained major on-farm agricultural activity...
- Local instability is likely to enhance rainfall activities mostly over Southern and Central Malawi....

1.0 WEATHER SUMMARY

During the period 21 to 31 October 2019, hot and generally dry north easterly airmass influenced weather over Malawi. As a result, extreme hot and dry weather conditions, which culminated into a heatwave, prevailed over Malawi.

1.1 RAINFALL SITUATION

During the period 21 to 31 October 2019, sporadic rainfall was experienced over Malawi. Rainfall was recorded at only a few stations including Lujeri Tea Estate in Mulanje district which recorded the highest rainfall amount of 61.6mm, while Chinthche Agriculture in Nkhata Bay district recorded 10.1mm and Chelinda in Rumphi district recorded 7.6mm.

recorded from various weather stations in Malawi had ranged from 31% at Ngabu Meteorological station to 56% at Mzuzu Aerodrome. Details as in Table 1.

1.6 SUNSHINE HOURS

Generally long hours of bright sunshine were observed over Malawi during the period under review. Daily values had ranged from 10.5 hours per day at Mzuzu Aerodrome to 11.7 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 11.3 to 11.9 cal/cm²/day. For details see Table 1.

1.3 AIR TEMPERATURE

Generally very hot temperatures were experienced over Malawi during the period 21 to 31 October 2019. Mean daily maximum temperatures had ranged from 29.2°C at Dedza to 42.1°C at Ngabu. Absolute maximum temperatures reached 44.6°C and 39.5 at Ngabu and Misosa, respectively. On the other hand, mean daily minimum temperatures had ranged from 17.2°C at Dedza to 27.5°C at Chichiri Meteorological station. Details in Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, the main on-farm activity over Malawi has been land preparation in readiness for effective planting rains.

1.4 WIND SPEEDS

During the period 21 to 31 October 2019 most parts of Malawi experienced light wind speeds. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 2.5 km per hour at Nkhata Bay Meteorological station to 13.7 km per hour at Chileka Meteorological station in Blantyre. More details in Table 1.

3. PROSPECTS FOR 2018/2019 RAINFALL SEASON

ENSO-neutral conditions have become established over central tropical Pacific Ocean. Climate models are projecting that the ENSO-neutral conditions are likely to persist throughout the 2019/2020 rainfall season. Based on these expectations and other analyses conducted, the rainfall forecast for the 2019/2020 is that:

"During October to December 2019, most of the north and northern parts of central areas of the country are expected to receive normal to below normal rainfall amounts, while most of the south and southern parts of central areas are expected to receive normal to above normal rainfall amounts;

1.5 RELATIVE HUMIDITY

During the period 21 to 31 October 2019, air over Malawi was generally dry. Daily average relative humidity values

During January to March 2020, most of the north and northern parts of central areas of the country are expected to receive above normal to normal rainfall amounts, while southern areas and southern parts of central areas are expected to receive normal to below normal rainfall amounts.”

4. OUTLOOK FOR 01-10 NOVEMBER 2019

Models for short and medium range forecasts indicate that local instability is likely to enhance convective activities mostly over southern and central Malawi during the first ten days of November 2019.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 OCTOBER 2019

ADD/STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hr	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RADIATION cal cm ⁻² p/day
KARONGA ADD										
CHITIPA	32.7	19.7	34.4	18.4	8.6	43	10.9	11.3	9.5	11.5
KARONGA	34.9	22.2	37.8	21.0	6.8	41	11.4	11.6	9.7	11.8
MZUZU ADD										
BOLERO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MZIMBA	32.1	19.0	33.6	16.1	5.8	41	10.6	10.0	8.2	11.4
MZUZU	32.0	18.0	33.5	16.6	5.0	56	10.5	9.2	7.4	11.3
NKHATA BAY	37.2	18.9	38.4	17.0	2.5	47	10.8	9.2	7.4	11.4
KASUNGU ADD										
KASUNGU	33.9	20.2	35.5	17.5	10.8	40	11.2	12.8	11.0	11.7
LILONGWE ADD										
CHITEDZE	33.5	19.0	34.7	17.5	4.3	38	11.3	9.7	7.9	11.7
DEDZA	29.2	17.2	30.9	14.2	5.0	45	11.1	9.1	7.4	11.6
K I A	33.2	19.3	35.0	18.0	8.6	38	11.5	11.7	9.9	11.9
SALIMA ADD										
NKHOTAKOTA	35.5	22.7	36.6	20.5	2.9	44	10.8	9.8	8.0	11.5
SALIMA	36.3	23.4	37.3	21.3	7.6	42	11.2	12.0	10.2	11.7
MACHINGA ADD										
NTAJA	36.6	23.0	38.2	17.8	3.9	37	N/A	N/A	N/A	N/A
MAKOKA	34.1	20.0	36.4	17.1	4.0	40	10.7	9.5	7.8	11.3
MANGOCHI	36.6	24.1	39.2	21.8	6.5	44	11.2	11.7	9.8	11.7
MONKEY BAY	35.6	23.9	37.1	20.8	9.0	40	11.1	12.9	11.1	11.6
BLANTYRE ADD										
BVUMBWE	32.9	20.9	34.4	19.0	6.1	45	10.6	10.2	8.5	11.2
CHICHIRI	33.0	27.5	35.8	19.0	5.8	40	10.9	11.1	9.3	11.4
CHILEKA	36.5	22.7	38.5	19.6	13.7	32	11.3	15.7	13.8	11.6
MIMOSA	37.0	20.0	39.5	18.0	3.6	37	10.6	9.7	7.9	11.2
SHIRE VALLEY ADD										
NGABU	42.1	26.3	44.6	24.3	3.6	31	11.7	11.4	9.5	11.9

Glossary of some terms on this table

- Eo = Potential Evaporation, Et = Potential Evapotranspiration and RH = Relative Humidity
- Mean Temperature of the day = (Max of the day + Min of the same day)/2
- ABS Max (Min) = Absolute Maximum (minimum) is the highest (lowest) of maximum (minimum) temperatures observed for a given number of days (calendar month) of a specified period of months (years).
- To convert Kilometres per hour (Km/hr) to Meters Per Second (mps) = Km/hr ÷3.6