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

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HIGHLIGHTS

- **Sporadic rainfall experienced over Malawi …**
- **Land preparation remained major on-farm agriculture activity…**
- **Local instability is likely to enhance rainfall activities mostly over Southern and Central Malawi….**

1.0 WEATHER SUMMARY

During the period 11 to 20 October 2019, hot and generally dry north easterly airmass influenced weather over Malawi. As a result, dry weather conditions prevailed over Malawi except few places where light to moderate rainfall amounts were recorded.

1.1 RAINFALL SITUATION

During the period 11 to 20 October 2019, sporadic rainfall was experienced over Malawi. The highest recorded rainfall amount was 47.2mm at Toleza farm in Balaka district, while Mzuzu Aerodrome recorded 38.2mm, Ekwendeni Agriculture in Mzimba recorded 14.7mm, Zomba Agriculture recorded 14.5mm, Thyolo Meteorological station recorded 12.4mm and Chancellor College in Zomba recorded 11.2mm.

Some stations recorded rainfall amounts less than 1mm.

1.3 AIR TEMPERATURE

Generally hot temperatures were experienced over Malawi during the period 11 to 20 October 2019. Mean daily maximum temperatures had ranged from 25.0°C at Kamuzu International Airport to 33.2°C at Karonga and Mangochi Meteorological stations while the mean daily minimum temperatures had ranged from 10.1°C at Kamuzu Intrnational Airport to 22.7°C at Salima Meteorological station. Details in Table 1.

1.4 WIND SPEEDS

During the period 11 to 20 October 2019 most parts of Malawi experienced light to moderate wind speeds. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 0.7 km per hour at Mzuzu Aerodrome to 13.7 km per hour at Chileka Meteorological station in Blantyre. More details in Table 1.

1.5 RELATIVE HUMIDITY

During the period 11 to 20 October 2019, air over Malawi was generally dry. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 42% at Kasungu Meteorological station to 76% at Bvumbwe in Thyolo district. Details as in Table 1.

1.6 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 11 to 20 October 2019. The daily values had ranged from 7.0 hours per day at Bvumbwe and Makoka to 9.6 hours per day at Kamuzu International Airport and consequently the amount of Solar Radiation had ranged from 8.8 to 10.6 cal/cm²/day. For details see 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.

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

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normal rainfall amounts, while most of the south and southern parts of central areas are expected to receive normal to above normal rainfall amounts;
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 21-31 OCTOBER 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 last ten days of October 2019.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 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	29.4	19.2	31.0	18.3	7.6	57	8.7	9.1	7.6	10.1
Karonga	33.2	22.1	34.7	19.5	7.9	53	8.1	10.2	8.7	9.7
MZUZU ADD										
Bolero	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mzimba	28.2	17.7	30	14.6	8.3	49	9.5	9.7	8.1	10.6
Mzuzu	26.5	17.1	28.2	13.5	0.7	67	8	6.3	4.9	9.6
Nkhata Bay	32.8	20.4	35	18.3	4.3	58	8.5	8.5	7.0	9.9
KASUNGU ADD										
Kasungu	29.9	17.5	31.4	12.4	10.1	42	8.5	10.7	9.2	9.9
LILONGWE ADD										
Chitedze	29.9	17.0	31.5	14.4	5.0	51	9.2	8.5	6.9	10.3
Dedza	25.5	14.2	27.1	12.1	5.0	63	7.8	7.0	5.6	9.4
K I A	25.0	10.1	29.8	9.4	7.2	56	9.6	7.8	6.4	10.6
SALIMA ADD										
Nkhotakota	31.5	22.4	32.8	21.1	4.0	55	9.5	9.1	7.4	10.5
Salima	32.7	22.7	34.1	18.8	13.0	52	9.2	12.3	10.7	10.3
MACHINGA ADD										
Ntaja	31.0	19.5	33.6	17.4	10.1	50	8.0	10.5	9.0	9.5
Makoka	27.9	16.1	31.5	14.2	5.4	65	7.0	5.2	4.5	8.8
Mangochi	33.2	21.3	36.6	19.1	6.1	44	9.2	10.1	8.5	10.3
Monkey Bay	32.7	21.8	34.4	14.5	10.1	45	8.8	11.6	10.1	10.0
BLANTYRE ADD										
Bvumbwe	25.5	15.6	29.4	13.2	8.3	76	7.0	7.0	5.6	8.8
Chichiri	27.1	18.1	30.9	13.6	4.7	64	7.2	7.1	5.8	8.9
Chileka	29.6	18.8	34.5	16.9	13.7	53	7.6	11.1	9.7	9.2
Mimosa	30.0	17.9	34.5	15.5	3.6	58	7.6	7.4	6.0	9.2
SHIRE VALLEY ADD										
Ngabu	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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