



Government of Malawi
Ministry of Natural Resources, Energy
and Mining

Malawi 10-day Weather and Agrometeorological Bulletin

"Produced 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 2018

Season: 2018/2019

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HIGHLIGHTS

- **Sporadic pre-season rainfall experienced over Malawi...**
- **Land preparation remained major on-farm agriculture activity...**
- **Enhanced rainfall conditions expected over Malawi during 01 to 10 November 2018...**

1.0 WEATHER SUMMARY

During the period 21 to 31 October 2018, a convergence ahead of pressure rises coupled with mid-level westerly trough brought sporadic pre-season rainfall over Malawi.

1.1 RAINFALL SITUATION

During the last ten days of October 2018 sporadic pre-season rainfall was reported over Malawi. A few rainfall stations had reported light to moderate rainfall amounts including Lujeri Tea Estate in Mulanje which had received 24mm, Thyolo 16mm, Chitipa Met and Chizunga Factory in Mulanje recorded 12mm. Other stations that reported rainfall amounts of less than 10mm included Mimosa and Bvumbwe Met 6mm, Nsanje Agric and Lisasadzi in Kasungu had 4mm, Mzuzu and Dedza Met 3mm each, Makhanga Agric in Nsanje and Chichiri Met in Blantyre had 2mm each while at Nchalo had 1mm. Otherwise dry weather had persisted over most places in Malawi. Erratic pre-season rainfall (Chidzimalupsya) is likely to persist over Malawi until major rain bearing systems get established over the country.

1.3 AIR TEMPERATURE

Hot temperatures were observed over Malawi during the period 21 to 31 October 2018. Mean maximum temperatures had ranged from 24°C over southern highlands at Bvumbwe Met in Thyolo to 34°C in lower Shire Valley at Ngabu in Chikwawa district while average minimum temperatures had ranged from 12°C at Dedza to 23°C at Ngabu. The highest maximum temperature was 40°C and was recorded at Ngabu in Shire Valley while the lowest temperature was 9°C recorded at Dedza Met. For more details see Table 1.

1.4 WIND SPEEDS

During the last ten days of October 2018, light to moderate wind speeds were observed over Malawi. Mean wind speeds measured at a height of two metres above the ground level across Malawi had ranged from 4Kmh per hour at Chitedze to around 17km per hour at Chitipa. More details are in Table 1.

1.5 RELATIVE HUMIDITY

During the last ten days of October 2018, air over Malawi was still dry. On average daily relative humidity values ranged from 40% at Mimosa and Monkey Bay to 64% at Mzuzu. Details are on the Table 1.

1.6 SUNSHINE HOURS

During the period 21 to 31 October 2018 durations of bright sunshine hours across Malawi had ranged from 8.3 to 10.8 hours per day and consequently the amount of solar radiation had ranged from 9.8 to 11.3 cal/cm²/day. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period 21 to 31 October 2018 the main agricultural activities were land preparation in readiness for the start of the main rainfall season and mobilization of farm inputs. The pre-season rainfall experienced so far has encouraged farmers to speed up land preparation and procurement of farm inputs.

3. PROSPECTS FOR 2018/19 RAINFALL SEASON

Global models are projecting the development of weak to moderate El Nino conditions between September and November 2018. Therefore, the rainfall forecast for the 2018/19 season in Malawi is that: **"During the period October 2018 to March 2019, most of the northern areas spilling over into north of central areas of the country are expected to receive normal to above normal rainfall amounts, while most of the southern areas spilling over into south of central areas of the country are expected to receive normal to below normal rainfall amounts."**

Thus at national level, better chances for **"good rainfall amounts"** are over the north and northern part of central Malawi, while higher chances for **erratic and suppressed rainfall** amounts are in the south and southern areas of central Malawi. In view of this forecast, farmers are advised to:

- finish land preparations on time to ensure timely planting and for the south include water harvesting structures where ridging has been done,
- ensure adequate vegetative soil cover where conservation agriculture is practised,

- plant drought tolerant food crops such as cassava, sweet potatoes, sorghum and millet, in the early days of the rainy season,
- plant early maturing crop varieties and apply adequate manure to improve soil moisture retention

4. OUTLOOK FOR 01 – 10 NOVEMBER 2018

Models for medium range forecasts indicate that Malawi is likely to experience enhanced rainfall conditions during the first ten days of November 2018. Farmers are advised to consider finalizing procurement of farm inputs and land preparations on time to ensure planting with first effective rains that are expected starting from November 2018.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 OCTOBER 2018

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hour	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION calcm ⁻² p/day
KARONGA ADD										
Chitipa	28.8	13.3	32.1	11.2	16.9	54	9.6	8.0	6.4	10.7
Karonga	32.2	21.4	35.3	18.2	10.1	53	10.2	8.8	7.1	11.1
MZUZU ADD										
Bolero	30.8	18.4	36.2	13.4	6.1	46	8.5	7.5	6.0	10.0
Mzimba	27.8	16.0	32.8	13.7	9.7	44	8.4	7.4	5.9	9.9
Mzuzu	25.0	14.5	30.6	11.0	7.9	64	8.4	6.5	5.1	9.9
Nkhata Bay	31.4	17.3	36.0	15.0	5.4	52	8.3	7.2	5.8	9.8
KASUNGU ADD										
Kasungu	28.8	16.0	30.0	14.5	8.3	42	8.3	7.3	5.8	9.8
LILONGWE ADD										
Chitedze	29.5	14.1	34.3	12.2	4.0	42	10.0	7.1	5.5	10.9
Dedza	25.1	11.9	30.9	9.2	7.2	48	9.0	6.6	5.2	10.2
KIA	28.0	14.1	33.1	11.8	8.6	41	9.9	7.5	5.9	10.8
NKHOTAKOTA ADD										
Nkhota kota	29.0	20.2	31.5	18.8	6.1	50	9.5	8.0	6.4	10.6
Salima	30.3	21.2	34.4	18.8	14.8	46	10.1	9.0	7.3	11.0
MANGOSHI ADD										
Makoka	29.5	15.3	33.0	12.1	7.2	52	10.7	7.7	6.0	11.3
Mangochi	32.4	18.8	36.7	17.4	4.3	51	10.5	8.0	6.3	11.2
Monkey Bay	30.9	20.8	34.6	18.6	14.0	40	10.5	9.3	7.6	11.2
Ntaja	29.9	16.5	35.7	13.4	11.9	50	10.5	8.3	6.6	11.2
BLANTYRE ADD										
Bvumbwe	24.1	12.8	31.4	10.5	9.0	55	10.0	6.9	5.4	10.8
Chichiri	25.4	13.7	31.0	11.2	8.6	45	10.5	7.3	5.7	11.1
Chileka	28.9	16.2	35.9	13.9	15.5	40	10.8	8.8	7.1	11.3
Mimosa	28.1	14.2	35.2	11.9	5.4	47	10.5	7.2	5.6	11.1
SHIRE VALLEY ADD										
Ngabu	33.7	22.5	40.3	20.0	5.8	60	10.0	8.4	6.8	10.8

Glossary of some terms on this table

- Eo = Potential Evapotranspiration, Et = Actual Evapotranspiration and RH = Mean 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 Meters Per Second (mps) to Kilometers per hour (Km/hr) = mps x 3.6
- N/A – means data was not available at the time of reporting