



Government of Malawi
Ministry of Forestry and Natural Resources

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 2020

Season: 2020/2021

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HIGHLIGHTS

- Isolated moderate rainfall amounts received over Malawi ...
- Land preparation remained in progress over most parts of the country...
- Generally hot and dry conditions expected during 01 to 10 November 2020

1.0 WEATHER SUMMARY

During the period 21 to 31 October 2020, a convergence ahead of pressure rises, coupled with mid-level trough resulted in fairly scattered rainfall activities with locally moderate amounts over Malawi.

1.1 RAINFALL SITUATION

During the period 21 to 31 October 2020, isolated cases of moderate to locally heavy rainfall amounts were recorded mainly over Malawi. Areas that recorded at least 30.0mm of rainfall included Thyolo Meteorological station which recorded 68.8 mm, Monkey Bay Meteorological station recorded 40.3mm, Masambanjatai Agriculture in Thyolo recorded 34.4mm, Naminjiwa Agriculture recorded 34.0mm and Chichiri Meteorological station recorded 31.7mm. For details see Table 1.

1.3 AIR TEMPERATURE

Generally hot temperatures were experienced over Malawi during the period 21 to 31 October 2020. Mean daily maximum temperatures had ranged from 26.3°C at Dedza Meteorological station to 37.7°C at Ngabu Meteorological station while the mean daily minimum temperatures had ranged from 15.5°C at Mzuzu Meteorological station to 24.9°C at Monkey Bay in Mangochi district. Details in Table 2.

1.4 WIND SPEED

During the period 21 to 31 October 2020 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 2.5 km per hour at Nkhotakota Meteorological station to 19.4 km per hour at Chitipa Meteorological station. More details in Table 2.

1.5 RELATIVE HUMIDITY

During the period 21 to 31 October 2020, air over Malawi was generally dry. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 42% at Boleero Meteorological station to 59% at Mzuzu Meteorological stations. Details as in Table 2.

1.6 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 21 to 31 October

2020. The daily values had ranged from 8.5 hours per day at Bvumbwe and Mimosa Meteorological stations to 11.5 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 9.8 to 11.8 cal/cm²/day. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, the main on-farm activities over Malawi have been land preparation in readiness of effective planting rains.

3. PROSPECTS FOR 2020/2021 RAINFALL SEASON

La Nina conditions have been established over eastern-central equatorial Pacific Ocean and are expected to influence the rainfall season over Malawi. Global models are projecting that these conditions are likely to persist throughout the 2020/2021 rainfall season. Based on these expectations, the rainfall forecast for the 2020/2021 season is that:

"During October to December 2020, most of the southern and central areas are expected to receive normal to above-normal rainfall amounts while most of the northern areas are expected to receive normal to below-normal rainfall amounts.

During January to March 2021, most areas in the south, center and the north are expected to receive normal to above-normal rainfall amounts. However, pockets of dry conditions are expected mostly over south and center"

At national level, there are higher chances of normal rainfall amounts over most parts of the country.

4. OUTLOOK FOR 01-10 NOVEMBER 2020

Models for short and medium range forecasts indicate that hot and dry conditions with isolated cases of rainfall activities are expected over Malawi during the period 01 to 10 November 2020.

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 21 TO 31 OCTOBER 2020

ADD	STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL EXPECTED RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	RAINY DAYS ≥.3mm	ACTUAL TOTAL RAINFALL TO DATE (mm)	NORMAL (EXPECTED) RAINFALL TO DATE (mm)	ACTUAL TO DATE AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	
KARONGA	Baka Res. Stn.	0.0	0.6	0	0	4.2	1.4	300	
	Chitipa Met.	0.5	3.6	14	1	3.0	4.6	65	
	Karonga Met.	0.0	1.3	0	0	4.6	1.8	256	
	Lupembe	0.0	1.1	0	0	7.5	1.6	469	
	Vinthukutu Agric	0.0	2.8	0	0	28.4	8.0	355	
MZUZU	Bolero Met	4.5	4.0	113	1	13.7	6.1	225	
	Bwengu Agric.	0.0	2.9	0	0	14.0	8.7	161	
	Chikangawa forest	1.2	6.5	18	1	26.8	12.2	220	
	Chintheche Agric	0.0	9.0	0	0	44.0	15.7	280	
	Ekwendeni Agric.	0.0	10.1	0	0	5.5	15.0	37	
	Euthini Agric.	0.0	5.5	0	0	0.0	7.0	0	
	Mbalachanda	0.0	2.3	0	0	0.0	4.8	0	
	Mbawa Res. Stn	28.0	8.5	329	1	36.0	10.8	333	
	Mzimba Met	6.0	3.6	167	1	10.3	5.2	198	
	Mzuzu Met.	0.0	10.7	0	0	70.0	36.1	194	
	NkhataBay Met.	20.4	5.2	392	3	26.0	13.9	187	
	Rumphi Boma	0.0	1.0	0	0	0.0	3.2	0	
	Zombwe Agric	0.0	3.1	0	0	18.5	4.8	385	
KASUNGU	Dowa Agric	8.0	4.8	167	2	8.0	7.0	114	
	Kasungu Met	15.1	5.4	280	1	68.2	6.7	1018	
	Madisi Agric	6.2	4.4	141	1	6.2	5.9	105	
	Mchinji Boma	0.0	17.4	0	0	13.5	29.1	46	
	Mkanda Met	8.9	9.1	98	1	8.9	12.1	74	
	Ntchisi Boma	18.0	2.4	750	2	18.0	5.6	321	
LILONGWE	Chileka Namitete	0.0	10.0	0	0	0.0	14.8	0	
	Chitedze Met.	0.0	7.9	0	0	4.4	12.3	36	
	K.I.A Met	1.1	8.2	13	1	1.1	11.0	10	
	Kasiya Agric	0.0	8.7	0	0	8.0	23.4	34	
	Mlangeni Njolomole	20.4	16.3	125	2	20.4	25.5	80	
	Nathenje Agric	0.0	8.0	0	0	23.6	13.2	179	
	Ntcheu - Nkhande	8.3	11.9	70	2	8.3	22.4	37	
	Dedza RTC	21.0	15.4	136	3	36.9	28.5	129	
SALIMA	Dwangwa Sugar Corp.	0.4	3.9	10	1	54.9	8.6	638	
	Lifuwu	14.1	1.4	1007	2	14.1	3.2	441	
	Nkhotakota Met	7.4	3.5	211	2	8.4	6.3	133	
	Salima Met	16.7	2.7	619	2	16.7	7.4	226	
MACHINGA	Balaka Township	11.9	16.0	74	1	25.1	27.3	92	
	Chancellor College	0.0	19.3	0	0	4.2	27.1	15	
	Chingale Agric	23.9	6.5	368	2	34.7	14.6	238	
	Mpilipili (Makanjila)	5.0	11.5	43	1	5.0	19.2	26	
	Makoka Met	11.4	12.8	89	2	21.8	24.5	89	
	Mangochi Met.	4.5	6.0	75	1	14.7	13.9	106	
	Monkey Bay Met.	40.3	2.6	1550	3	41.5	4.1	1012	
	Naminjiwa Agric	34.0	20.3	167	3	34.0	29.0	117	
	Namwera Agric	3.3	8.4	39	2	3.3	12.3	27	
	Ntaja Met.	17.6	7.9	223	2	17.7	13.1	135	
	Phalula Agric	0.0	14.3	0	0	0.0	27.6	0	
	Toleza Farm	2.8	10.0	28	1	34.8	18.6	187	
Zomba RTC	18.4	13.3	138	2	27.2	24.7	110		
BLANTYRE	Bvumbwe Met.	21.7	17.2	126	2	23.7	30.0	79	
	Chichiri Met.	31.7	39.1	81	4	32.7	97.0	34	
	Chileka Airport	10.0	16.5	61	2	13.1	28.8	45	
	Chizunga Factory	9.1	22.9	40	1	17.5	42.4	41	
	Lujeri Tea Estate	9.5	42.1	23	2	63.5	100.0	64	
	Masambanjati Agric	34.4	15.9	216	1	40.7	37.2	109	
	Mimosa Met.	3.0	32.3	9	2	53.7	62.0	87	
	Mpemba Vet	29.1	19.6	148	2	29.1	37.7	77	
	Mulanje Boma	3.7	62.2	6	1	26.1	123.6	21	
	Mwanza Boma	3.8	22.9	17	1	35.8	44.7	80	
	Neno Agric	0.0	18.6	0	0	0.0	33.6	0	
	Satemwa Tea Est. No.1	17.4	21.0	83	3	17.4	36.4	48	
	Thuchila Agric	11.5	11.0	105	1	11.5	29.1	40	
	Thyolo Met	68.8	18.2	378	3	83.8	38.9	215	
	SHIRE VALLEY	Chikwawa Boma	0.0	12.6	0	0	0.0	22.1	0
		Kasinthula Res. Stn.	1.1	13.4	8	1	1.6	22.2	7
Makhanga Met		7.0	11.7	60	1	7.0	22.4	31	
Ngabu Met.		9.0	13.5	67	1	26.6	23.3	114	
Nsanje Boma		4.0	32.1	12	1	4.0	52.8	8	

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 OCTOBER 2020

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	30.5	20.6	31.6	19.0	19.4	46	8.8	14.6	13.0	10.1
KARONGA	34.7	22.3	36.4	21.1	9.0	49	11.4	12.2	10.3	11.8
MZUZU ADD										
BOLERO	32.3	21.9	33.4	20.7	3.6	42	10.2	9.3	7.5	11.1
MZIMBA	29.4	18.6	30.8	17.2	8.3	50	10.6	10.3	8.5	11.4
MZUZU	28.3	15.5	29.6	13.0	4.7	59	8.9	7.8	6.3	10.2
NKHATA BAY	33.7	18.6	34.9	15.0	3.2	54	8.9	8.4	6.8	10.2
KASUNGU ADD										
KASUNGU	30.9	19.6	32.2	17.5	10.4	46	9.7	11.4	9.7	10.7
LILONGWE ADD										
CHITEDZE	31.2	17.9	33.0	16.9	4.3	44	9.2	8.7	7.1	10.4
DEDZA	26.3	15.6	27.9	14.5	4.3	57	8.6	7.5	6.0	10.0
K I A	30.2	17.7	22.0	16.1	9.4	45	10.7	10.9	9.2	11.4
SALIMA ADD										
NKHOTAKOTA	32.8	21.8	33.2	22.1	2.5	57	10.8	9.1	7.3	11.5
SALIMA	33.2	24.4	33.6	23.1	9.4	48	11.2	12.3	10.5	11.7
MACHINGA ADD										
NTAJA	33.4	21.1	35.1	19.1	10.8	48	8.7	11.7	10.1	10.0
MAKOKA	30.6	18.6	32.2	15.2	5.8	52	8.6	8.8	7.3	10.0
MANGOCHI	35.2	24.0	37.3	22.6	4.0	49	10.8	10.1	8.3	11.4
MONKEY BAY	33.9	24.9	36.0	22.8	7.9	52	10.8	11.6	9.8	11.4
BLANTYRE ADD										
BVUMBWE	27.9	17.7	30.0	16.2	7.9	44	8.5	9.5	8.0	9.8
CHICHIRI	29.8	17.3	31.9	16.5	4.3	49	9.1	8.3	6.8	10.2
CHILEKA	32.3	20.8	35.2	18.4	13.3	48	11.3	13.2	11.5	11.6
MIMOSA	32.7	18.3	34.6	15.5	5.4	48	8.5	9.0	7.5	9.8
SHIRE VALLEY ADD										
NGABU	37.7	24.1	39.6	22.3	5.8	46	11.5	11.6	9.7	11.8

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 Meters Per Second (mps) to Kilometres per hour (Km/hr) = mpsx3.6