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 – 30 November 2017 Season: 2017/2018 Issue No.6

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HIGHLIGHTS

- Locally heavy rainfall amounts experienced over several places…
- Major agricultural activities included land preparation, weeding and planting…
- Increased planting opportunities expected during first ten days of December 2017…

1.0 WEATHER SUMMARY

During the last ten days of November 2017, the Inter Tropical Convergence Zone (ITCZ) got established over Malawi and caused scattered to widespread locally heavy downpours accompanied with hail, lightning, thunder and strong winds which caused damage to infrastructure in some parts of the country.

1.1 RAINFALL SITUATION

During the last ten days of November 2017, several places in Malawi had reported substantial total rainfall amounts. Significant rainfall amounts of at least 50mm were reported over several places including Chintheche Agric in Nkhata Bay which recorded 196mm, Mchinji Agric reported 157mm, Masambanjati Agric in Thyolo registered 135mm, Madisi Agric in Dowa had 116mm, Mimosa Met and Chileka-Namitete recorded 113mm, Mbawa Research Station in Mzimba accumulated 109mm, Mwimba Research station in Kasungu had 105mm, Baka Research in Karonga 94mm, Karonga Met 89mm, Nkhotakota Met 83mm, Nsanje and Balaka Agric stations had 82mm, Kasinthula Agric Research station in Chikwawa had 80mm, Salima Met 75mm, Dowa Agric 68mm, Mlangeni-Njolomole in Ntcheu reported 66mm, Makhanga Met in Nsanje reported 63mm, Thuchila Agric in Mulanje and Mangochi Met 61mm, Nchalo 59mm, Ngabu 56mm while Mzimba and Ntaja Met stations had reported 52mm. All these rainfall amounts were above the long term average.

1.3 AIR TEMPERATURE

During the last ten days of November 2017, Malawi had experienced warm to hot temperatures. Warm temperatures were mainly experienced over highlands and hot temperatures were recorded over low altitude areas like along the lakeshore and in valleys. Mean maximum temperatures had ranged from 24.5°C to 34°C while mean minimum temperatures had ranged from 15.8°C to around 24°C. The highest maximum temperature was recorded at Ngabu (39.5°C). while the lowest temperature was around 14°C recorded at Bvumbwe Met. For more details see Table 1.

1.4 WIND SPEEDS

During the period 21 to 30 November 2017 mean wind speeds measured at a height of two metres above the ground level across Malawi ranged from 3.2Km per hour at Nkhotakota Met to 9.7km per hour at Chileka Met. More details are in Table 1.

1.5 RELATIVE HUMIDITY

The average relative humidity values during the last ten days of November 2017 had ranged from 61% at Ngabu to around 78% at Bvumbwe in Thyolo district. Details are on the Table 1.

1.6 SUNSHINE HOURS

During the last ten days of November 2017 most areas in Malawi were experienced cloudy conditions. As a result low durations of sunshine hours were observed across Malawi. The mean sunshine hour durations had ranged from 4 to around 10 hours per day. The longest durations of sunshine hours were registered in low altitude areas like in Shire Valley as well as along the lakeshore areas. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

During the last ten days of November 2017 there was a great improvement in rainfall performance over Malawi. Most areas had experienced good rainfall amounts. These rains had facilitated planting of crops, germination of various crops as well as basal fertilizer application. The rains had also supported growth and development of pasture and regeneration of the natural vegetation. The major on-farm agricultural activities over Malawi included land preparation, procurement of farm inputs and equipment. In areas where significant rainfall amounts have been received, farmers were reported to have started planting crops.

To properly utilize the rains, farmers should adhere to principles of good husbandry including early land preparation, use of appropriate seeds, timely planting, implementation of

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proper plant population and spacing, control of weeds, pests and diseases, fertilizer application and irrigation.

3. PROSPECTS FOR 2017/18 RAINFALL SEASON

By July 2017 the Sea Surface Temperatures which drive the rainfall patterns of the world including Malawi were in the Neutral El Niño Southern Oscillation (ENSO) phase and climate models were predicting that neutral conditions were likely to persist during the 2017/2018 rainfall season. Based on neutral ENSO conditions, the rainfall forecast for 2017/18 season in Malawi was that during the period October 2017 to March 2018 a greater part of the country would experience normal total rainfall amounts. This meant that priority planning for the 2017/18 season in Malawi should be based on expectations of average rainfall depending on the climate of the area. In view of the 2017/18 climate forecast, farmers in Malawi have been advised to ensure timely planting, 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 DECEMBER 2017

Models for short and medium range forecasts show that most parts of Malawi are likely to experience improved rainfall performance during the first ten days of December 2017. Farmers are therefore advised to finalize procurement of farm inputs and land preparations to ensure planting with the first effective rainfall which have already started in some parts of Malawi.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 NOVEMBER 2017

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	29.2	18.2	31.8	17.0	9.4	62	6.1	6.7	5.4	8.4
Karonga	32.0	23.2	34.7	20.2	6.8	63	7.3	7.5	6.1	9.2
MZUZU ADD										
Bolero	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mzimba	28.7	18.6	31.7	17.1	4.7	65	6.2	6.3	5.0	8.5
Mzuzu	27.0	17.6	29.8	16.3	5.4	73	6.5	6.1	4.8	8.8
Nkhata Bay	32.3	21.7	35.0	20.6	2.9	71	7.0	6.9	5.5	9.1
KASUNGU ADD										
Kasungu	28.5	19.5	32.5	18.1	7.2	67	5.3	6.2	5.0	8.0
LILONGWE ADD										
Chitedze	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dedza	24.5	16.5	27.7	15.7	8.3	74	6.5	6.0	4.8	8.8
KIA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SALIMA ADD										
Nkhota kota	30.6	23.5	34.5	20.5	2.2	67	5.6	6.6	5.3	8.2
Salima	31.2	23.4	35.0	21.0	9.4	67	6.1	7.1	5.8	8.5
MACHINGA ADD										
Makoka	27.3	18.5	23.4	17.0	3.2	75	4.1	5.3	4.2	7.2
Mangochi	31.5	22.5	36.0	20.4	2.9	64	9.6	8.0	6.3	10.8
Monkey Bay	31.3	24.3	35.0	22.1	8.3	62	9.6	8.6	7.0	10.8
Ntaja	30.0	21.3	34.7	19.4	7.9	71	4.2	6.0	4.9	7.3
BLANTYRE ADD										
Bvumbwe	25.5	15.8	29.8	13.9	6.8	78	4.9	5.3	4.2	7.7
Chichiri	26.9	18.5	31.1	16.6	5.4	75	4.6	5.5	4.4	7.5
Chileka	28.9	18.9	33.2	17.1	9.7	71	4.6	6.0	4.9	7.5
Mimosa	28.8	19.5	33.2	18.0	4.0	68	5.1	5.9	4.8	7.9
SHIRE VALLEY ADD										
Ngabu	34.0	24.1	39.5	21.1	4.0	61	9.6	8.6	6.9	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) = mpsx3.6
- N/A – means data was not available at the time of reporting