10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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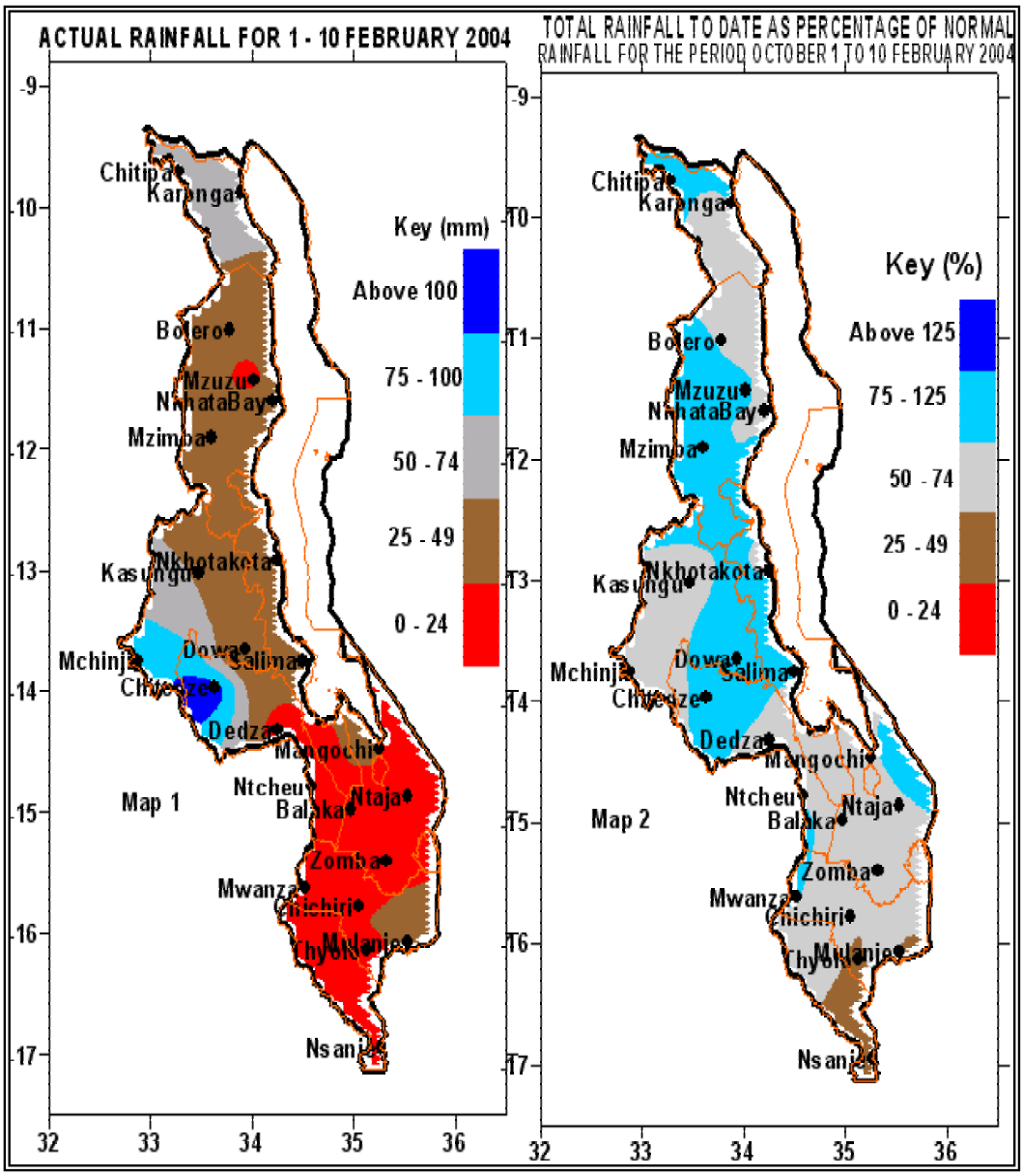
HIGHLIGHTS

- **Relatively dry weather experienced over most parts…**
- **Crops survive on residual moisture as dry spell supports weeding…**
- **Cumulative rainfall performance improves…**
- **Moderate to heavy rains expected during 11 – 20 February 2004…**



All inquiries should be addressed to: The Director of Meteorological Services, P.O. Box 2, Chileka, MALAWI
Tel: (265) 1 692 312/333/320 Fax: (265) 1 692 329 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL

In the first 10-days of February the main rain belt shifted to extreme northern parts of Malawi. As a result significant rainfall was registered over the extreme northern parts of Malawi and locally at Chitedze in Lilongwe. Chitipa and Karonga registered five and eight rainy days respectively. Southern Malawi was generally dry. Most areas received below 25mm of rainfall and during the entire ten day period most areas registered a single rainy day. Generally during the whole period total rainfall amounts were mostly below 50mm except at Chitedze in the centre and Chitipa, Karonga and Chikangawa forest in the north.

Although most areas became comparatively dry during the first ten days of February 2004, cumulative rainfall performance continued to improve over most parts of Malawi. Most areas had received over half of normal rainfall except lower Shire Valley and parts of Mulanje districts. Some areas have received normal rainfall (between 75 and 125% of normal rainfall).

1.2 MEAN AIR TEMPERATURE

Mean daily maximum temperatures over most parts of Malawi were in the warm to hot category except at Dedza where mild temperatures were experienced (Table 2). The highest daily average maximum temperature was reported at Ngabu (32°C) in Shire Valley while the lowest was reported at Dedza (23°C) in central Malawi.

1.3 AVERAGE DAILY WIND SPEEDS

Average wind speeds recorded at a height of 2m above ground ranged from 1 to 3 m/s. Chileka Airport recorded the highest (3.2m/s).

1.4 MEAN RELATIVE HUMIDITY

Relatively dry conditions were experienced over Malawi. This is evident when we compare daily average relative humidity values reported during first ten days of February with those reported in the preceding period. In the previous ten day period the highest was 91% while the lowest was 71% while in the period under discussion the highest was 85% and 69% was the lowest.

1.5 MEAN SUNSHINE HOURS

The dry spell that was experienced over most parts of Malawi caused sunshine hours to improve. Most areas experienced an average of eight hours of bright sunshine on daily. Solar radiation also improved in most parts of the country. Most areas registered radiation values in excess of 8 Cal/ cm^{-2}/day.

2. AGROMETEOROLOGICAL ASSESSMENT

Within the first ten days of February most parts of Malawi experienced a dry spell. This dry spell facilitated weeding and fertilizer application. Crops survived on residual soil moisture. Longer sunshine hours were experienced. This supported photosynthesis, a process through which crops manufacture food. Due to late onset of rains, maize crop varies from establishment to vegetative stages in some areas particularly in the south. Elsewhere, early planted maize crop is reported to be flowering and more soil moisture is required for the purpose of cob development. So far no major outbreaks of pest and diseases have been reported. Despite late and erratic onset of rains in some parts of Malawi, the general crop situation looks promising especially where fertilizer has been applied and good harvests are possible particularly if rains can fall consistently between now and end of March.

3. FORECAST FOR 11 – 20 FEBRUARY 2004

Current atmospheric conditions indicate that both the Inter Tropical Convergence Zone (ITCZ) and Congo Air mass will become active over Malawi. Therefore, moderate to heavy rains are expected over most parts of during the period 11 to 20 February 2004.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF FEBRUARY 2004: PERIOD 1 - 10

STATION NAME **SOUTHERN REGION**	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	TOTAL TO DATE mm	NORMAL TO DATE mm	TOTAL TODATE AS % NORMAL	RAINY DAYS ≥ 0.3 mm
Bvumbwe Met.	16.5	80.0	369.4	669.8	55	1
Chancellor College	4.0	113.8	537.4	855.8	63	1
Chichiri Met.	14.6	82.3	367.1	679.5	54	1
Chikwawa Boma	14.0	60.7	342.7	479.4	71	2
Chileka Airport	9.6	70.9	377.8	570.6	66	1
I.T.G. Limbe	42.5	86.9	301.7	676.3	45	1
Mangochi Met.	32.8	86.8	342.0	531.9	64	1
Mimosa Met.	28.2	108.0	363.3	844.5	43	3
Monkey Bay Met.	27.8	124.7	294.4	670.1	44	3
Naminjiwa Agric	35.5	83.3	437.2	640.7	68	1
Namwera Agric	4.1	77.1	635.6	666.9	95	1
Nchalo Sucoma	29.1	69.4	216.2	435.6	50	2
Ngabu Met.	11.3	69.6	213.4	489.8	44	3
Ntaja Met.	10.5	62.6	393.6	563.8	70	1
Thyolo Met	20.2	92.2	300.9	702.3	43	3
CENTRAL REGION						
Chitedze Met.	121.6	72.1	459.3	586.6	78	4
Dedza Met	12.6	72.3	348.4	598.4	58	1
L.I.A. Met.	29.4	68.8	467.8	547.6	85	2
Nkhotakota Met	25.8	94.0	496.3	709.7	70	3
Salima Met	45.0	99.1	543.1	735.3	74	3
NORTHERN REGION						
Chikangawa forest	54.7	63.5	415.8	609.0	68	4
Chitipa Met	74.0	89.9	548.3	605.2	91	5
Karonga Met.	62.6	49.9	374.4	472.7	79	8
Mzimba Met	23.5	66.5	546.5	551.6	99	1
Mzuzu Met.	19.2	58.0	554.4	625.5	89	6
Nkhata Bay Met.	47.0	87.1	532.7	849.2	63	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF FEBRUARY 2004

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD-TION cal cm-² p/day
BVUMBWE	24.7	15.5	26.7	14.3	1.5	77	N/A	N/A	N/A	N/A
CHICHIRI	24.6	16.4	27.2	15.7	1.5	77	N/A	N/A	N/A	N/A
CHILEKA	27.3	19.5	28.8	18.9	3.2	73	8.9	7.4	5.9	10.3
NTAJA	28.2	19.9	29.8	19.5	1.8	72	10.1	7.7	6.1	11.1
CHITEDZE	26.7	16.5	27.9	14.3	0.6	69	N/A	N/A	N/A	N/A
CHITIPA	26.1	16.6	28.0	15.3	2.0	78	N/A	N/A	N/A	N/A
DEDZA	23.2	14.7	24.5	13.5	1.0	85	1.0	3.6	2.9	5.2
KARONGA	30.1	22.2	32.2	21.5	1.4	75	5.3	6.2	5.0	8.0
L I A	26.4	14.6	27.8	13.6	1.3	74	9.1	6.7	5.1	10.5
MANGOCHI	31.1	21.0	32.5	18.1	1.5	67	N/A	N/A	N/A	N/A
MIMOSA	26.4	20.0	30.2	18.3	1.4	81	N/A	N/A	N/A	N/A
MONKEY BAY	29.5	21.8	31.1	19.4	1.5	69	N/A	N/A	N/A	N/A
MZIMBA	26.1	15.7	28.0	14.1	1.5	75	N/A	N/A	N/A	N/A
MZUZU	25.1	15.9	27.9	13.4	2.0	80	N/A	N/A	N/A	N/A
NGABU	32.2	22.7	34.6	21.5	2.2	69	8.6	8.0	6.4	10.1
NKHATA BAY	29.0	20.1	31.5	18.5	2.0	78	N/A	N/A	N/A	N/A
NKHOTAKOTA	29.3	21.6	30.0	21.0	2.6	70	N/A	N/A	N/A	N/A
SALIMA	29.6	21.7	30.8	19.2	2.3	72	8.8	7.7	6.1	10.3
THYOLO	26.6	17.3	28.6	16.4	1.2	76	N/A	N/A	N/A	N/A

Glossary of some terms on this table

- E_O = Potential Evaporation
- E_T = 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).
- N/A means data not available