10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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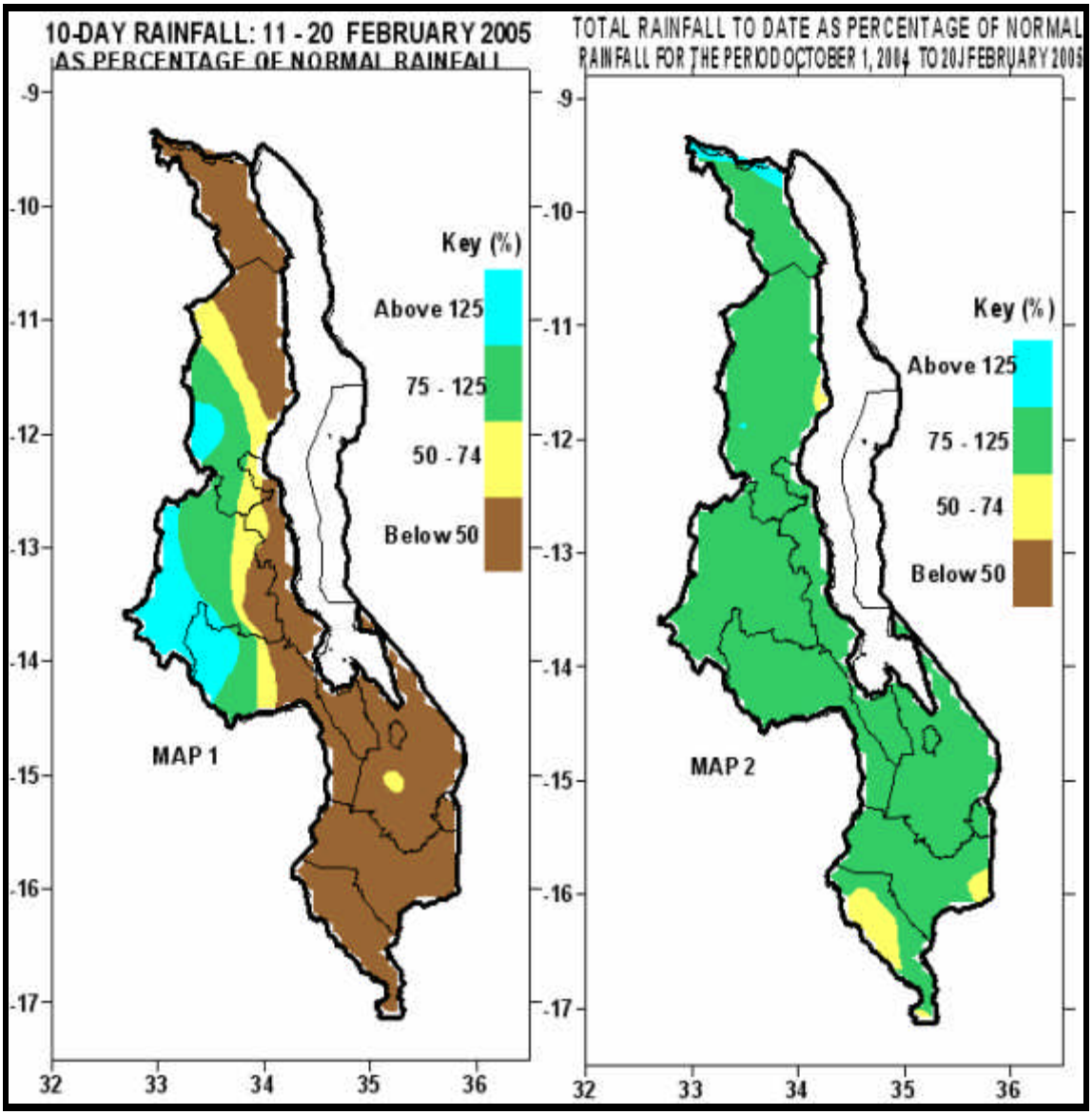
HIGHLIGHTS

- **Widespread dry spell persist over the country …**
- **Maize crop under heavy moisture stress …**
- **Light to moderate rains expected in the last days of February 2005…**



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. WEATHER SUMMARY

1.1 RAINFALL

Malawi has been under the influence of High Pressure Cells that prolonged dry conditions over many parts of the country while Congo Air brought relief rainfall to some parts of the centre during the second 10-day period of February 2005.

The dry spell which has been widespread over the centre and south continued during the period 11 – 20 February 2005. A number of places continued to record little or no rainfall during the entire 10-day period. For example Chikwawa Boma, Kasinthula, Mangochi, Mulanje Boma, Nchalo and Thyolo Boma in the south and Dowa in the centre reported NIL rainfall during the entire period. Dowa and Mangochi have had more than 20 continuous dry spell days by 20th February 2005. Some parts of the country, however, received some rainfall. Areas which received more than 30mm included Liwonde, Chancellor College, and Makoka in the south, Chitedze, Kamuzu Internal Airport, Mlanjgeni, Nkhota kota and Ntcheu – Nkhande in the centre, Karonga, Chikangawa and Nkhata Bay in the north. Very few areas registered above normal 10-day rainsfall amounts. These included Chitedze (161%), KIA and Mzimba Met (142%). See Map 1 and Table 1.

Cumulative rainfall from 1st October 2004 up to 20 February 2005 indicated that most areas of Malawi have received normal rainfall. However, pockets of below normal and above normal rainfall exist in some parts of the country. Areas that have received below normal cumulative rainfall include Nkhata bay (56%) in the north, Chikwawa (66%) in Shire Valley and Lujeri (68%) in Mulanje. Above normal rainfall amounts have been registered at Karonga and Mzimba in the north **Map 2 and Table 1).**

[Note: Normal = 75 – 125%, above normal = ? 125%, below normal = ? 75%, extremely below normal = ? 50%]

. MEAN AIR TEMPERATURE

Mean maximum temperatures show that hot weather continued over most pasts of Malaw during the second 10-days of February 2005. Daily average maximum temperatures were in upper 20s and lower 30s in most areas except in lower Shire Valley where Ngabu reached 35.9°C and over Dedza where the average maximum temperature was 25°C.The highest absolute maximum air temperature at Ngabu reached a 38.9°C mark while the lowest absolute minimum temperature was 15.6°C at Dedza.

. MEAN DAILY WIND SPEEDS

Mean daily wind speeds at a height of 2 meters above ground were light and variable. The values ranged from 0.5m/s (1.8km/hr) at Chitedze to 3.9m/s (14.0km/hr) at Thyolo (See Table 2 for more details).

. MEAN RELATIVE HUMIDITY

The second 10-days of February 2005 were even drier than the first 10-days of February 2005. Mean daily relative humidity values ranged from 64% at Chitipa and Ngabu to 77% at Mzuzu compared to 66% at Salima and 82% at Mzuzu during the first 10-days of February 2005. The average value during the period under discussionwas 72%.

. AGROMETEOROLOGICAL ASSESSMENT

Most areas of the country particularly in the centre and south crops have been scorched by the dry spell that has occurred for more than one month by 20th February 2005. The situation was worse along Shire river valley from Mangochi through Balaka to Chikwawa and Nsanje districts due high temperatures and long sunshine hours. Some crops had reached permanent wilting and will not recover even if rains resume. Crops that have suffered most include maize, tobacco, beans and groundnuts. The dry spell came at a time when most of the maize was at the critical stage of tasselling and cobbing which requires a lot of moisture. Moisture stress at this stage of maize development has more detrimental effects on crop yield than at any other stage as it affects pollination and restricts cob filling.Inadequate moisture has also resulted in stunted growth in most crops. In some areas maize is tasseling at lower than normal height. Due to current dry spell some farmers might not harvest anything and this will have implications in food security during the coming consumption period (April 2005 – March 2006).

3. SEASONAL OUTLOOK

Despite the current dry spell, the 2004/05 seasonal forecast update for February to April 2005 indicate that Malawi is likely to receive normal to above normal rainfall amounts during the period. This means that the rains are expected to resume to normalcy in most parts of Malawi.

. FORECAST FOR – FEBRUARY

Meanwhile weather systems indicate that pulses of Congo Air will bring light to moderate rainfall over some parts of Malawi during the last five days of February 2005.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF FEBRUARY 2005: PERIOD 11 – 20

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	[3] 0.3 mm
Bvumbwe Met.	25.5	79.1	32	679.9	748.9	91	1
Chancellor College	39.3	82.0	48	958.1	937.8	102	4
Chichiri Met.	28.8	80.1	36	784.9	759.6	103	3
Chikwawa Boma	0.0	51.3	0	348.9	530.7	66	0
Chileka Airport	6.8	67.8	10	490.5	638.4	77	2
Kasinthula Res. Stn.	0.0	46.3	0	447.0	487.8	92	0
Liwonde Township	39.6	60.2	66	621.5	591.4	105	2
Lujeri Tea Estate	19.6	138.8	14	910.8	1341.2	68	4
Makoka Met	31.2	70.0	45	752.7	700.4	107	3
Mangochi Met.	0.0	68.3	0	573.1	600.2	95	0
Mimosa Met.	2.5	94.0	3	779.4	938.5	83	2
Monkey Bay Met.	10.1	79.1	13	689.1	749.2	92	1
Mulanje Boma	0.0	103.7	0	891.5	1029.1	87	0
Mwanza Boma	3.5	73.6	5	707.6	704.4	100	1
Nchalo Sucoma	0.0	56.6	0	361.8	492.2	74	0
Ngabu Met.	4.8	58.4	8	404.6	548.2	74	2
Ntaja Met.	6.7	65.4	10	520.3	629.2	83	1
Satemwa Tea Est. No.1	4.2	75.9	6	899.1	854.0	105	2
Toleza Farm	16.9	65.0	26	612.0	613.6	100	1
Thyolo Boma	0.0	78.7	0	593.5	781.3	76	0
Thyolo Met	5.9	83.0	7	850.2	785.3	108	1
Zomba RTC	13.2	68.8	19	995.4	849.2	117	3
CENTRAL REGION							
Chitedze Met.	104.0	64.5	161	686.1	651.1	105	4
Dedza Met	29.1	83.4	35	521.0	681.8	76	2
Dowa Agric	0.0	72.1	0	627.6	620.4	101	0
Dwangwa Sugar Corp.	17.3	52.6	33	565.7	731.4	77	3
Dzonzi Forest	32.8	70.9	46	902.4	707.4	128	3
K.I.A. Met.	82.2	57.8	142	741.0	605.4	122	3
Mlangeni Njolomole	47.1	93.3	50	791.2	721.1	110	6
Nkhotakota Met	47.4	97.6	49	840.9	807.3	104	3
Ntcheu - Nkhande	38.9	80.3	48	934.6	778.1	120	5
Ntchisi Boma	0.9	71.8	1	687.5	616.9	111	2
Salima Met	11.3	96.4	12	695.6	831.7	84	3
Dedza RTC	2.3	68.8	3	607.2	722.4	84	1
NORTHERN REGION							
Baka Res. Stn.	11.6	63.4	18	445.7	560.9	79	1
Chikangawa forest	54.5	74.8	73	769.5	683.8	113	5
Chitipa Met	4.6	75.4	6	816.8	680.6	120	2
Karonga Met.	4.6	53.3	9	814.6	526.0	155	3
Mzimba Met	106.0	74.8	142	789.4	626.4	126	5
Mzuzu Met.	17.0	69.6	24	629.8	695.1	91	2
NkhataBay Met.	31.4	80.2	39	521.3	929.4	56	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 2 OF FEBRUARY 2005

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	27.4	15.7	29.3	14.6	1.2	71
CHICHIRI	27.6	18.2	30.0	16.0	0.8	72
CHILEKA	30.6	20.2	33.1	19.3	1.1	70
NTAJA	31.1	21.6	32.8	20.7	1.3	74
CHITEDZE	28.9	17.7	30.4	16.9	0.5	75
CHITIPA	29.3	17.6	30.6	16.0	1.6	64
DEDZA	25.0	16.7	26.6	15.6	1.0	76
KARONGA	30.8	22.3	32.1	21.4	1.2	75
K I A	29.0	17.3	30.3	16.2	1.4	70
MAKOKA	28.7	18.1	30.9	16.8	0.7	75
MANGOCHI	33.8	22.3	35.5	21.5	1.2	69
MIMOSA	28.5	19.5	33.8	17.0	1.1	68
MONKEY BAY	31.6	23.2	32.7	22.3	1.5	69
MZIMBA	28.7	17.8	30.2	17.1	0.7	71
MZUZU	27.5	17.5	28.4	15.9	1.4	77
NGABU	35.9	23.3	38.6	22.0	1.7	64
NKHATA BAY	31.3	21.3	32.8	20.1	1.5	74
NKHOTAKOTA	29.4	20.1	30.3	20.1	1.4	76
SALIMA	31.3	22.1	32.7	21.1	1.6	71
THYOLO	29.4	18.8	31.6	16.6	3.9	73

Glossary of some terms on this table

- 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 Kilometers per hour (Km/hr) = mpsx3.6