10-Day Rainfall & Agromet Bulletin

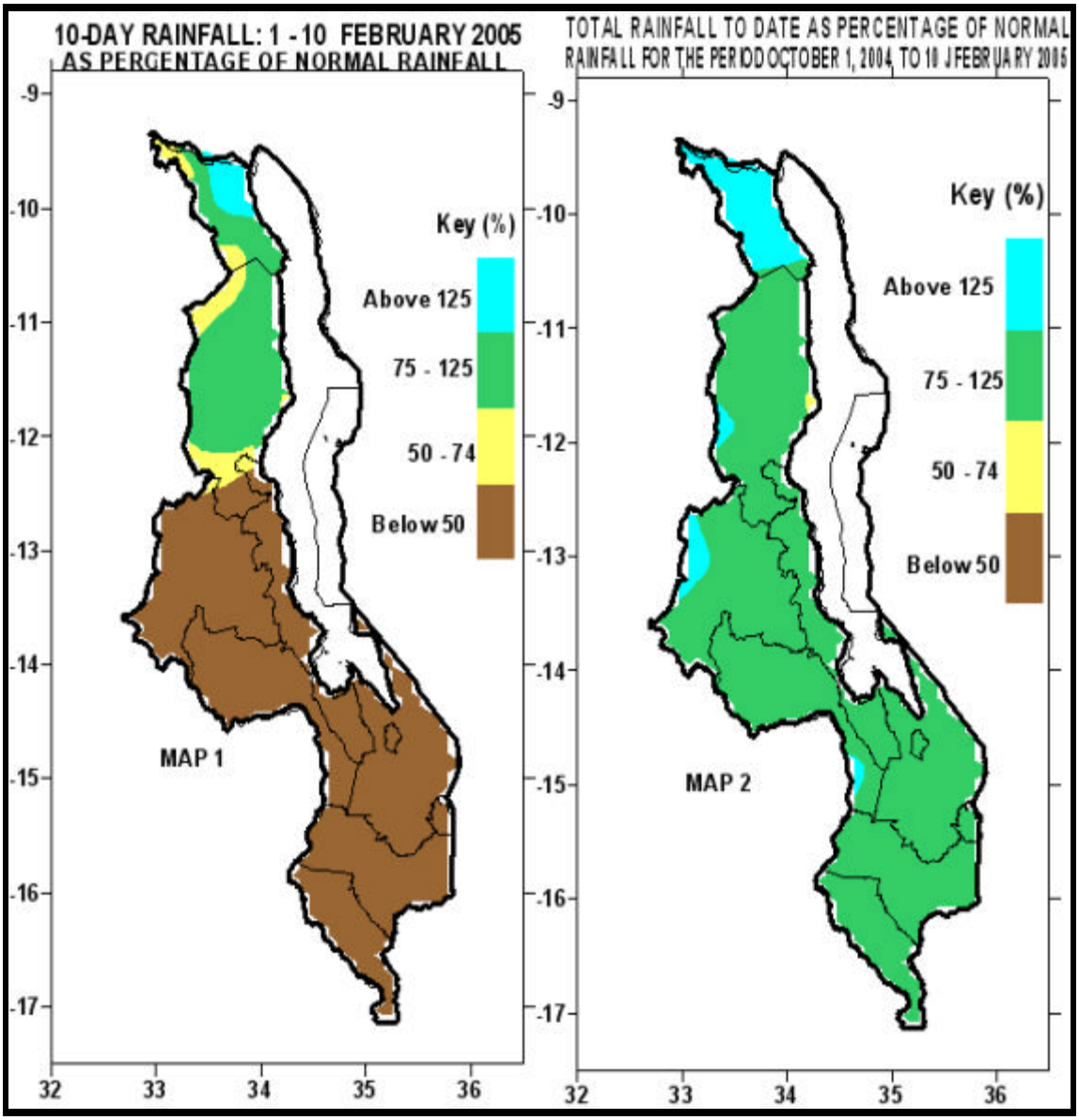
Department of Meteorological Services

Period: 1 – 10 February 2005 Season: 2004/2005 Issue No.13

Release date: 15 February 2005

HIGHLIGHTS

- **Dry spell continued over the south and centre …**
- **Maize crop at yield formation stage wilting …**
- **Some rainfall relief expected during 11 – 20 February 2005…**



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. WEATHER SUMMARY

1.1 RAINFALL

Malawi has been under the influence of High Pressure Cells that brought dry air into central and southern areas resulting in dry conditions in those areas. These cells replaced the Inter Tropical Convergence Zone (ITCZ) which was confined to Southern Tanzania resulted in light to moderate rains over the northern areas.

There has been a continuation the dry spell during the period 1 – 10 February which started during the last days of January 2005 over southern and central areas of the country. A number of places continued to record little or no rainfall during the entire 10-day period. For example Toleza Farm, Mangochi in the south and Dowa and Dedza RTC in the centre reported NIL rainfall during the entire period. At the same time the northern areas enjoyed relatively good rains. A good number of places registered normal to above normal rainfall amounts. Significant falls were registered at Karonga (325%),Chikangawa (112%), Mzuzu (99%), Mzimba (96%) and Lupembe (89%). See Map 1 and Table 1.

Cumulative rainfall from 1st October 2004 up to 10 February 2005 shows that most areas of Malawi have received normal to above normal rainfall. However, pockets of below normal rainfall exist in some parts of the country such as Chikwawa (73%) and Lujeri (74%). The hardest hit is still Nkhata Bay which has so far received 58% of the expected rainfall **(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 Malawi was mostly hot during the first 10-days of February 2005. Daily average maximum temperatures were mostly above 28°C except over the highlands where Bvumbwe and Mzuzu reported 25.4°C and 25.5°C respectively. The highest absolute maximum air temperature was 36.2°C, reported at Ngabu while the lowest absolute minimum temperature was 12.9°C reported at Bvumbwe.

. MEAN DAILY WIND SPEEDS

Mean daily wind speeds observed at a height of 2 meters above ground remained light and variable. The values ranged from 0.7m/s (2.5km/hr) at Chitedze to 2.4m/s (8.6km/hr) at Salima (See Table 2 for more details).

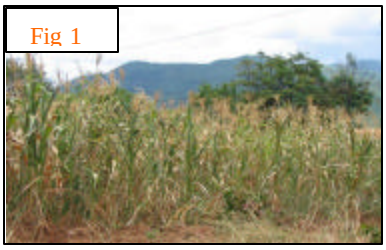
. MEAN RELATIVE HUMIDITY

The first 10-days of February 2005 were drier than the last 10-days of January 2005. Mean daily relative humidity values ranged from 66% at Salima to 82% at Mzuzu compared to 68% at Karonga and 86% at Kamuzu International Airport during the last 10-days of January 2005. The average value was at 73%.

. AGROMETEOROLOGICAL ASSESSMENT

The dry spell which started in the last 10-days of January and continued into the first 10-days of February 2005 in most areas of the country has negatively affected crop production in the country..

Fig 1



This dry spell has seriously affected maize production particularly over the south and central areas. In these areas most of the maize had reached flowering stage, a critical stage of development where its use of water is at maximum.The situation was worse in low lying areas where high temperatures and long sunshine hours were experienced. In some parts of the country crops were reported prematurely drying up with no hope of recovery. Figure 1 shows a flowering maize crop prematurely drying up in Chileka area.

Already crop production had been negatively affected by amongst others heavy continuous rains in December and early January that resulted in floods, leaching of soil nutrients and weeding problems.

Fig 2

On the other hand, the dry spell facilitated drying of matured hybrid maize that was planted early November 2004. Figure 2 shows a matured hybrid maize for 2004/05 season in Chileka area.

Meanwhile, maize crop stages mainly range from flowering to maturity.

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 Congo Air will bring some rainfall relief over some parts of Malawi. However, this air mass is still not expected to bring widespread rains. Therefore, localised dry spells are expected to persist during the second 10-days of February 2005.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF FEBRUARY 2005: PERIOD 1 – 10

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
Balaka Township	29.5	75.0	39	499.9	574.0	87	1
Bvumbwe Met.	4.0	80.0	5	654.4	669.8	98	2
Chancellor College	3.6	113.8	3	918.8	855.8	107	2
Chichiri Met.	20.1	82.3	24	756.1	679.5	111	4
Chikwawa Boma	15.2	60.7	25	348.9	479.4	73	2
Chileka Airport	1.6	70.9	2	483.7	570.6	85	2
Kasinthula Res. Stn.	17.9	54.2	33	447.0	441.5	101	2
Liwonde Township	4.9	72.8	7	581.9	531.2	110	2
Lujeri Tea Estate	10.0	126.3	8	891.2	1202.4	74	3
Makoka Met	0.4	82.3	0	721.5	630.4	114	1
Mangochi Met.	0.0	86.8	0	573.1	531.9	108	0
Mimosa Met.	30.2	108.0	28	776.9	844.5	92	3
Monkey Bay Met.	1.7	124.7	1	679.0	670.1	101	1
Mulanje Boma	5.8	96.8	6	891.5	925.4	96	2
Mwanza Boma	27.5	88.8	31	704.1	630.8	112	1
Nchalo Sucoma	31.0	69.4	45	361.8	435.6	83	2
Ngabu Met.	15.8	69.6	23	399.8	489.8	82	3
Ntaja Met.	8.2	62.6	13	513.6	563.8	91	2
Satemwa Tea Est.	24.5	105.7	23	894.9	778.1	115	5
Toleza Farm	0.0	75.8	0	595.1	548.6	108	0
Thyolo Met	10.4	92.2	11	844.3	702.3	120	4
Zomba RTC	19.5	101.1	19	957.9	780.4	123	4
CENTRAL REGION							
Chitedze Met.	2.1	72.1	3	582.1	586.6	99	3
Dowa Agric	0.0	66.7	0	627.6	548.3	114	0
Dwangwa Sugar Corp.	15.9	85.7	19	548.4	678.8	81	2
L.I.A. Met.	0.6	68.8	1	658.8	547.6	120	1
Kasungu Met	28.1	88.9	32	684.0	562.8	122	2
Mlangeni Njolomole	44.2	92.9	48	744.1	627.8	119	1
Natural Res. College	1.5	57.8	3	710.4	547.7	130	1
Nkhotakota Met	33.9	94.0	36	793.5	709.7	112	2
Ntcheu – Nkhande	13.7	92.0	15	895.7	697.8	128	4
Ntchisi Boma	0.9	72.3	1	686.6	545.1	126	1
Salima Met	1.2	99.1	1	684.3	735.3	93	1
Dedza RTC	0.0	103.2	0	604.9	653.6	93	0
NORTHERN REGION							
Chikangawa forest	71.4	63.5	112	715.0	609.0	117	5
Chitipa Met	37.7	89.9	42	812.2	605.2	134	2
Karonga Met.	162.4	49.9	325	810.0	472.7	171	5
Lupembe	52.0	58.4	89	600.9	417.6	144	4
Mzimba Met	63.9	66.5	96	683.4	551.6	124	5
Mzuzu Met.	57.4	58.0	99	612.8	625.5	98	6
NkhataBay Met.	54.9	87.1	63	489.9	849.2	58	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF FEBRUARY 2005

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	25.4	15.0	26.8	12.9	1.1	75
CHICHIRI	26.6	17.3	29.0	16.2	1.1	73
CHILEKA	29.1	20.1	31.3	18.2	2.0	72
NTAJA	30.0	21.0	32.0	19.5	1.2	73
CHITEDZE	28.4	17.0	29.2	15.4	0.7	69
CHITIPA	26.9	17.2	30.5	16.9	1.8	74
KASUNGU	28.9	18.0	29.5	16.6	1.3	69
KARONGA	30.2	21.7	31.5	20.2	1.4	78
K I A	28.0	16.3	28.7	14.4	1.5	72
MAKOKA	27.6	17.3	29.0	14.9	1.3	72
MANGOCHI	32.5	21.7	34.5	20.5	1.8	70
MIMOSA	30.0	18.9	31.9	16.9	1.1	73
MONKEY BAY	32.6	22.3	31.3	21.0	1.7	69
MZIMBA	27.1	16.4	29.0	14.0	0.9	73
MZUZU	25.5	16.1	27.6	13.8	1.7	82
NGABU	33.4	23.0	36.2	21.0	1.6	73
NKHATA BAY	30.0	20.6	31.3	19.0	1.5	79
NKHOTAKOTA	29.7	22.0	31.2	21.6	2.0	70
SALIMA	30.7	22.5	31.4	21.1	2.4	66
THYOLO	27.8	18.1	29.4	16.7	0.9	78

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