10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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HIGHLIGHTS

- **Some locally heavy rains received over Mzuzu and Mulanje…**
- **Land preparations in readiness for planting rains continue …**
- **Conditions favourable for more rains in the first 10-days of November 2004…**

1. WEATHER SUMMARY

1.1 RAINFALL

In the last 10 days of October 2004 a convergence ahead of pressure rises caused locally heavy rains particularly over southern and northern highlands. High 10-day total rainfall amounts were reported at Lujeri (113mm) and Mulanje Boma (105mm) in the south and Mzuzu Met (120mm) in the north. During

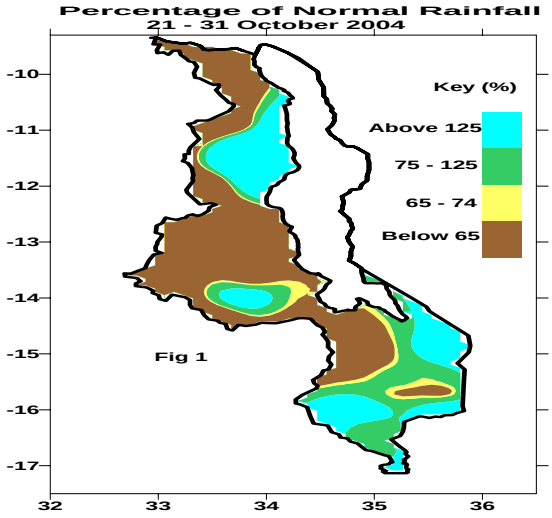

Fig 1

the period under review more areas experienced above normal (above 125%) 10-day rainfall totals (Fig.1 and Table 1). Notable High 24-hour rainfall amounts were registered on 31st October 2004 when in the north Mzuzu had 120mm and around Mulanje in the south Lujeri Tea Estate reported 109mm, Mulanje Boma 80mm and Mimosa 67mm.

Although some areas have been receiving substantial rains, the main rain bearing systems for Malawi namely, the Inter Tropical Convergence Zone (ITCZ) and Congo Airmass are not yet established.. Therefore, the rains that have been received so far are still part of the first rains that are locally known as ***Chizimalupsya***.

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures indicated that the weather remained hot over most parts of Malawi except in Shire Valley where very hot temperatures were reported. Mean maximum air temperature ranged from 28°C at Bvumbwe in Thyolo to 36°C at Ngabu in Shire Valley. Mean minimum temperatures showed cool to mild conditions over most areas.

1.3 MEAN SUNSHINE HOURS

Sunny weather dominated over Malawi. Most areas enjoyed over 8 hours of bright sunshine per day.

1.4 MEAN DAILY WIND SPEEDS

At 2 meters height, observed wind speeds ranged from 1 to 5 metres per second or 3 to 18 Km/hr (Table 2). The highest wind speed was reported at Chitipa Boma (5m/s or 18Km/hr).

1.5 MEAN RELATIVE HUMIDITY

The daily average relative humidity values over Malawi ranged from 44% at Chitipa to 67% at Bvumbwe. The values showed a fairly moist atmosphere in most areas except over the extreme north.

2. AGROMETEOROLOGICAL ASSESSMENT

The amounts of rainfall received so far have improved grazing conditions for livestock and facilitated land preparations. Reports indicate that in some areas farmers have been prompted to start planting crops at small scale as a way of staggering planting dates. Climatologically early planting favours mostly highlands areas. These

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

include Mulanje, Thyolo, Mwanza-Neno, Dedza, Dzalanyama and Mzuzu where normally daily temperatures and rates of evapotranspiration are generally low.

3. SEASONAL OUTLOOK

According to 2004/05 seasonal outlook, Malawi is expected to receive sufficient rains for agricultural production. However, these rains are expected to be erratic in some areas. Updates for the November, December and January period indicate improved rainfall prospects for Malawi. The amount of rainfall for the farmer to start planting crops will vary from crop to crop and location to location. It also depends on soil types, weather aspects, methods and quality of land preparation. Generally planting of crops starts when the soil has enough moisture to support germination of the crop.

4. FORECAST FOR 1 – 10 NOVEMBER 2004

Medium term weather models are projecting favourable conditions for improved rainfall pattern during the first 10-days of November 2004. Local heavy downpours are expected.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF OCTOBER 2004: PERIOD 21 - 31

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**	**≥ 0.3 mm**
Blantyre TownHall	12.0	14.4	83	22.0	24.1	91	1
Bvumbwe Met.	21.3	17.0	125	37.1	31.4	118	2
Chancellor College	13.6	18.4	74	55.0	27.8	198	3
Chichiri Met.	10.1	20.3	50	60.4	33.6	180	3
Chikwawa Boma	26.0	9.0	289	26.0	16.4	159	1
Chileka Airport	17.6	18.6	95	23.6	29.0	81	3
Kasinthula Res. Stn.	44.5	13.4	332	44.5	22.2	200	2
Lujeri Tea Estate	113.0	42.1	268	218.9	100.0	219	3
Mangochi Met.	5.9	6.2	95	53.5	15.2	352	3
Mimosa Met.	81.0	31.0	261	81.0	60.7	133	4
Mulanje Boma	105.4	46.4	227	174.8	101.9	172	3
Mwanza Boma	11.6	17.6	66	43.2	34.8	124	2
Naminjiwa Agric	5.0	20.9	24	32.0	31.9	100	1
Nchalo Sucoma	15.5	17.1	91	15.9	27.5	58	2
Ngabu Met.	11.3	13.9	81	15.2	26.4	58	4
Ntaja Met.	15.6	8.1	193	19.3	15.4	125	3
Satemwa Tea Est. No.1	36.1	24.0	150	40.8	49.0	83	3
Thyolo Met	21.9	20.9	105	26.9	42.7	63	1
Zomba R.T.C	14.7	11.9	124	60.0	18.9	317	1
CENTRAL REGION							
Chitedze Met.	11.0	6.4	172	31.1	10.8	288	1
K.I.A. Met.	5.8	9.4	62	11.1	11.1	100	1
Kasungu Met	1.1	7.5	15	2.9	9.4	31	1
Natural Res. College	18.8	4.8	392	33.9	9.4	361	2
Nkhotakota Met	0.5	4.3	12	4.1	6.6	62	1
Salima Met	0.6	0.9	67	6.2	6.1	102	1
Dedza R.T.C	1.9	15.4	12	15.1	28.5	53	1
NORTHERN REGION							
Bolero Met	0.0	4.1	0	0.0	6.7	0	0
Chikangawa forest	23.5	6.8	346	24.3	13.6	179	1
Chitipa Met	0.0	3.5	0	0.0	5.6	0	0
Karonga Met.	0.0	0.5	0	0.0	0.9	0	0
Mzimba Met	0.0	3.0	0	0.7	4.7	15	0
Mzuzu Met.	120.3	10.8	1114	124.9	34.1	366	1
NkhataBay Met.	14.3	2.0	715	14.3	69.4	21	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF OCTOBER 2004

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	Eo mm per day	Et mm per day	RAD-TION cal cm^{-2} p/day
BVUMBWE	27.9	17.0	32.4	12.8	2.2	67	4.2	3.5	4.4
BOLERO	32.5	21.3	33.4	18.5	3.0	53	5.4	4.7	4.4
CHICHIRI	28.3	17.4	31.9	14.6	0.9	59	4.2	3.5	4.4
CHILEKA	31.5	20.3	35.1	17.6	3.6	56	5.4	4.7	4.4
NTAJA	34.1	22.0	34.7	18.8	3.2	62	5.2	4.5	4.4
CHITIPA	30.8	17.1	31.8	15.4	4.7	44	8.6	7.1	10.3
KASUNGU	30.8	19.3	32.9	16.2	3.3	50	5.5	4.8	4.4
KARONGA	33.9	23.6	36.2	22.5	2.8	54	9.4	7.6	11.5
K I A	30.2	17.5	32.5	15.5	2.1	55	7.6	6.0	10.4
MANGOCHI	33.8	22.7	37.5	21.2	2.2	53	5.3	4.6	4.4
MIMOSA	30.2	20.2	35.1	23.4	1.3	56	4.6	3.9	4.4
MZIMBA	30.1	18.7	32.0	17.4	1.6	57	4.6	3.9	4.4
MZUZU	29.6	15.5	30.3	12.9	2.4	64	4.4	3.8	4.4
NGABU	36.0	22.8	41.2	21.5	3.8	53	9.5	7.8	10.5
NKHATA BAY	33.4	19.3	35.0	18.0	2.0	58	4.9	4.2	4.4
NKHOTAKOTA	35.0	25.4	34.1	20.7	2.5	62	8.6	7.0	10.0
SALIMA	32.9	23.1	35.2	20.7	3.1	53	5.7	5.0	4.4

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