10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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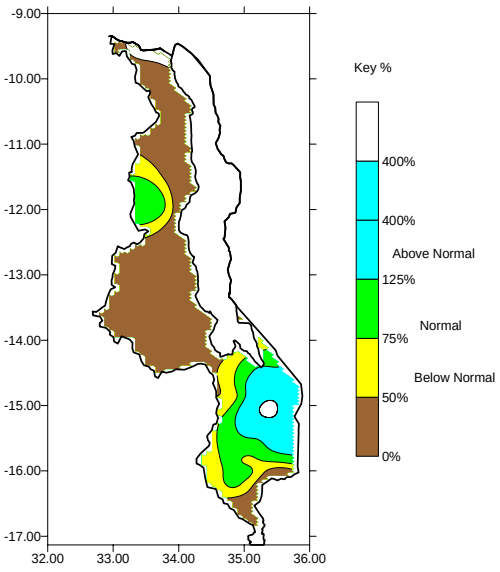
HIGHLIGHTS

- **More rains received over the south…**
- **Land preparations continues and planting commences in some areas…**
- **Conditions favourable for more rains in the 2nd ten-days of November 2004…**

1. WEATHER SUMMARY

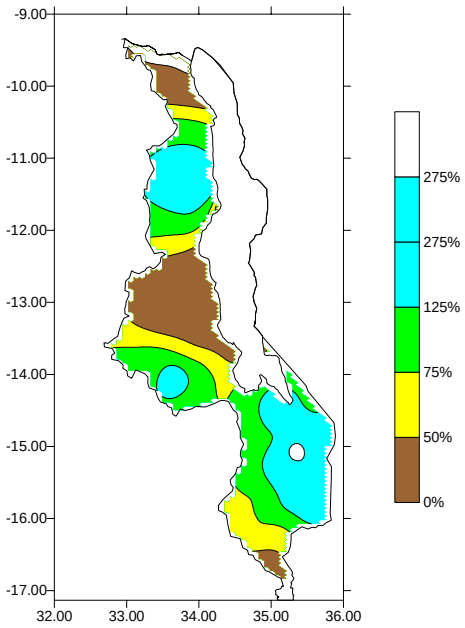
1.1 RAINFALL

Percentage of Normal Rainfall 1-10 Nov 2004



In the first 10 days of November 2004 moist unstable northeasterly air mass caused locally heavy rains particularly over southern and northern highlands. Most areas in south received rainfall greater than 20mm, while central and northern areas received less than 20mm. High 10-day total rainfall amounts were reported at Chanco (65mm) and Liwonde Township (62mm), Ntaja (42mm), Zomba RTC (35mm), Mangochi (27mm), Chileka (26mm) and Chichiri (25mm). During the period more areas in the south received normal to above normal (above 125%) 10-day rainfall totals (Fig.1 and Table 1). More areas in the south have reported above normal total to date. In the South, notable total to date was reported at Lujeri (229mm), Mulanje Boma (185mm), Chanco (120mm), Zomba RTC (95mm); in the centre NRC (36mm), Chitedze (34mm) and in the north it was Mzuzu (128mm) and Chikangawa (37mm).

Total Todate: 1 Oct to 10 Nov 2004



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 over the country.

1.2 MEAN AIR TEMPERATURE

Mean maximum indicate that air temperatures slightly dropped over most parts of Malawi. However, Shire Valley still registered very high temperatures. Mean maximum air temperature ranged from 26.3°C at Bvumbwe in Thyolo to 35.6°C at Ngabu in Shire Valley. Highest absolute maximum temperature of 38.5°C was reported at Ngabu while the lowest absolute minimum temperature of 10.2°C was reported at Bvumbwe.

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1.3 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), with the lowest at Chichiri (1m/s).

1.4 MEAN RELATIVE HUMIDITY

Mean relative humidity slightly increased over the country. The daily average relative humidity values over Malawi ranged from 49% at Kasungu to 73% at Dedza. The values show a build up of moisture in the atmosphere in most areas over the country.

2. AGROMETEOROLOGICAL ASSESSMENT

The amounts of rainfall received so far particularly in the south have improved soil moisture levels favourable for seed germination and has encourage farmers to speed up land preparations in readiness for planting. 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 include Mulanje, Thyolo, Mwanza-Neno, Dedza, Dzalanyama and Mzuzu where normally daily temperatures and rates of evapotranspiration are generally low.

The amount of rainfall for the farmer to start planting crops will depend on the type of crop, climate of a particular locality, the soil type, methods and quality of land preparation plus other aspects. However, in general, planting of crops starts when the soil has enough moisture to support germination of the particular crop one wants to plant.

3. SEASONAL OUTLOOK

According to 2004/05 seasonal outlook, Malawi is expected to receive sufficient amount of rains for water resources and agricultural production. However, distribution of these rains is expected to be erratic in space and time resulting in some areas experiencing dry spells or floods of different intensities. Updates for the November, December and January period indicate improved rainfall prospects for Malawi.

4. FORECAST FOR 1 – 10 NOVEMBER 2004

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

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

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS % NORMAL	RAINY DAYS
SOUTHERN REGION	mm	mm		mm	mm		
Bvumbwe Met.	18.1	23.4	77.4	55.2	54.8	100.7	3
Chancellor College	65.2	20.1	324.4	120.2	47.9	250.9	3
Chichiri Met.	24.8	38.5	64.4	85.2	72.1	118.2	4
Chileka Airport	25.4	26.3	96.6	49.0	55.3	88.6	5
Kasinthula Res. Stn.	0	24.1	0.0	44.5	46.3	96.1	0
Liwonde Township	62.1	13.6	456.6	80.5	27.0	298.1	2
Lujeri Tea Estate	10.5	57.9	18.1	229.4	157.9	145.3	3
Mangochi Met.	26.7	18.3	145.9	80.2	33.5	239.4	4
Mimosa Met.	9.9	35.5	27.9	90.9	96.2	94.5	2
Mwanza Boma	0	17.6	0.0	43.2	68.0	63.5	0
Mulanje Boma	10.2	37.8	27.0	185.0	139.7	132.4	3
Namwera Agric	20.5	20.3	101.0	23.5	34.5	68.1	2
Nchalo Sucoma	19.8	22	90.0	35.7	49.5	72.1	3
Ngabu Met.	4.3	19.1	22.5	19.5	45.5	42.9	2
Ntaja Met.	41.9	11.5	364.3	61.2	26.9	227.5	2
Satemwa Tea Est. No.1	31.6	38.8	81.4	72.4	87.8	82.5	5
Toleza Farm	18	21.9	82.2	34.1	37.7	90.5	1
Thyolo Met	17.8	37.6	47.3	44.7	80.3	55.7	3
Zomba Land Hus.	34.9	23.3	149.8	94.9	42.2	224.9	3
CENTRAL REGION				0.0			
Chitedze Met.	2.6	13.7	19.0	33.7	24.5	137.6	1

Dedza Met	6.7	13.7	48.9	16.9	24.3	69.5	3
Dwangwa Sugar Corp.	0.3	17.6	1.7	8.4	28.3	29.7	1
L.I.A. Met.	5.4	11	49.1	16.5	22.1	74.7	1
Kasungu Met	0	18.3	0.0	2.9	27.7	10.5	0
Natural Res. College	1.6	11.1	14.4	35.5	20.5	173.2	1
Nkhotakota Met	0	13.3	0.0	4.1	19.9	20.6	0
Salima Met	1.2	12.2	9.8	7.4	18.3	40.4	1
NORTHERN REGION				0.0			
Chikangawa forest	12.8	19.8	64.6	37.1	33.4	111.1	1
Chitipa Met	0	6.5	0.0	0.0	12.1	0.0	0
Karonga Met.	0	3.9	0.0	0.0	4.8	0.0	0
Mzimba Met	15.4	12.8	120.3	16.1	17.5	92.0	2
Mzuzu Met.	2.9	20.3	14.3	127.8	54.4	234.9	1
NkhataBay Met.	6.2	69.1	9.0	20.5	138.5	14.8	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF NOVEMBER 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	26.3	15.1	25.9	10.2	2.2	72	3.9	3.3	4.5
CHICHIRI	26.4	17.5	29.5	12.1	0.9	66	4.0	3.3	4.5
CHILEKA	29.8	19.6	32.0	15.6	3.2	63	4.9	4.2	4.5
NTAJA	30.3	20.5	32.4	17.0	3.0	60	5.0	4.4	4.5
CHITEDZE	29.5	16.5	31.5	12.9	1.1	52	4.5	3.8	4.5
CHITIPA	30.3	16.3	32.8	15.4	4.9	53	5.7	5.0	4.5
DEDZA	23.7	15.0	26.5	11.5	1.8	73	3.7	3.1	4.5
KASUNGU	30.3	18.2	32.1	14.2	3.2	49	5.5	4.8	4.5
K I A	29.6	16.8	31.4	12.0	2.0	58	4.6	3.9	4.5
MANGOCHI	32.5	21.4	34.6	19.0	1.3	61	4.6	3.9	4.5
MZIMBA	28.7	18.1	31.0	16.0	1.7	58	4.5	3.8	4.5
MZUZU	26.9	16.2	29.3	14.8	2.2	68	4.2	3.5	4.5
NGABU	35.6	22.4	38.5	18.2	3.4	56	8.9	7.3	10.0
NKHATA BAY	31.8	20.4	34.3	18.3		63	4.1	3.4	4.5
NKHOTAKOTA	31.0	22.6	32.4	21.2		56	4.4	3.7	4.5
SALIMA	31.8	22.7	33.9	21.5	2.9	56	5.3	4.7	4.5
THYOLO	28.9	17.5	31.5	12.9	1.7	64	4.4	3.7	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