10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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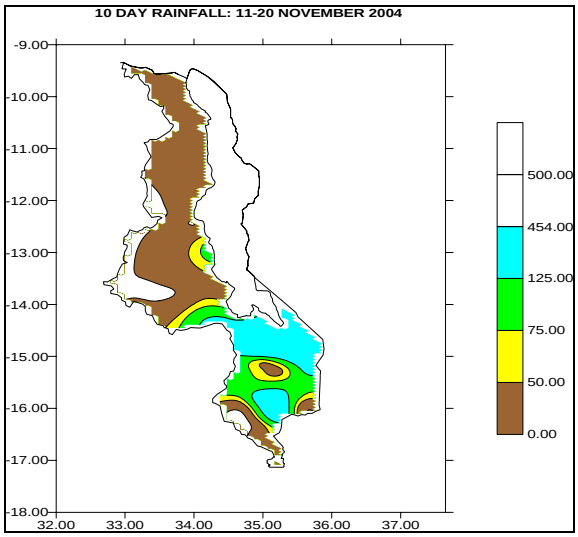
HIGHLIGHTS

- **More rains continue to be 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

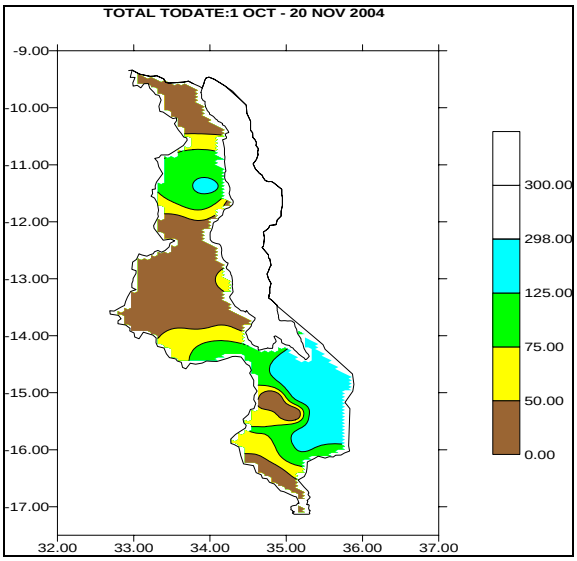
Map 1



During the 2nd ten days of November, Malawi has been generally under the influence of warm, moist north easterly airmass that caused scattered thundery showers to occur in some parts of the country especially southern areas. A ridge of high pressure temporarily reduced weather activities over the country towards the end of the period.

There has been an increase in rainfall amounts over most areas in south and few areas in the centre and north. Notable 10-day total rainfall amounts in the south were reported at Satemwa (93mm) Chichiri and Thyolo (65mm), Blantyre Town hall (58mm), in the centre Dedza (28mm), Nkhotakota (24mm) and in the north only Nkhatabay reported notable rainfall amount of 33mm. During the period more areas in the south received normal to above normal 10-day rainfall of up to 454% at Mangochi (Map 1 and Table 1).

Map 2



Total to date amounts of rainfall show that more areas in the south have reported above normal rainfall, while most areas in the north and centre have reported below normal rainfall as indicated on Map 2 and Table 1. Notable falls in the south were reported at Lujeri (232mm), Satemwa (165mm), Chichiri (150mm) Chanco (145mm), Mangochi (136mm), Zomba RTC (124mm); in the centre Dedza (45mm), NRC (37mm) Nkhotakota (28mm) and in the north it was Mzuzu (135mm), Nkhatabay (53mm) and Chikangawa (42mm).

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

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Mean maximum indicate that Shire Valley still registered very high temperatures. Mean maximum air temperature ranged from 26.9°C at Bvumbwe in Thyolo to 35.6°C at Ngabu in Shire Valley. Highest absolute maximum temperature of 37.6°C was reported at Ngabu. The lowest absolute minimum temperature of 10.2°C was reported again at Bvumbwe and the highest absolute maximum of 40.2°C was reported again at Ngabu.

1.3 MEAN DAILY WIND SPEEDS

At 2 meters height, observed wind speeds ranged from 0.8m/s (3km/hr) at Chichiri to 4 m/s (15 km/hr) at Chitipa and Ngabu (See Table 2).

1.4 MEAN RELATIVE HUMIDITY

Mean relative humidity slightly increased over the country. The daily average relative humidity values over Malawi ranged from 48% at Chitipa to 75% at Bvumbwe. The values indicate that there is an increase 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 crop growth. The increase in rainfall over centre and north will prompt many farmers to speed up land preparations in readiness for planting. The rains so far received will also increase availability of pasture for animal feed.

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 grow.

3. SEASONAL OUTLOOK

According to 2004/05 seasonal outlook, Malawi is expected to receive sufficient amount of rains for water resources, agricultural production and other uses. 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 December and January period indicate improved rainfall prospects for Malawi.

4. FORECAST FOR 1 – 10 NOVEMBER 2004

Currently weather systems indicate that Malawi will be mostly under the influence of deep trough running across the country from Republic of Congo to Indian Ocean. Hence thunderstorms and rainshowers, which will be locally heavy, are expected to occur in some parts of the country especially over southern and central areas.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF NOVEMBER 2004: 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	
Balaka Township	25.0	28.4	88	25.0	69.5	36	2
Blantyre TownHall	58.0	29.8	195	80.0	81.6	98	6
Bvumbwe Met.	41.1	27.8	148	96.3	82.6	117	6
Chancellor College	24.7	29.2	85	144.9	77.1	188	1
Chichiri Met.	64.6	29.1	222	149.8	101.2	148	4
Chileka Airport	29.9	23.4	128	78.9	78.7	100	5
Liwonde Township	22.7	20.6	110	103.2	47.6	217	3
Lujeri Tea Estate	2.8	90.5	3	232.2	248.4	93	1
Mangochi Met.	55.8	12.3	454	136.0	45.8	297	3
Mimosa Met.	3.7	52.0	7	94.6	148.2	64	2
Monkey Bay Met.	1.9	13.6	14	7.7	22.5	34	5
Mwanza Boma	27.6	24.0	115	70.8	85.6	83	3
Ngabu Met.	4.1	13.5	30	23.6	59.0	40	1
Ntaja Met.	37.1	14.3	259	98.3	41.2	239	3
Satemwa Tea Est. No.1	93.0	31.1	299	165.4	118.9	139	4
Toleza Farm	50.8	20.1	253	84.9	57.8	147	3
Thyolo Met	60.4	24.2	250	105.1	104.5	101	4
Zomba Land Hus.	29.0	27.9	104	123.9	70.1	177	2
CENTRAL REGION							

Chitedze Met.	0.4	30.2	1	34.1	54.7	62	1
Dedza Met	27.8	17.6	158	44.7	41.9	107	2
Dwangwa Sugar	1.5	45.0	3	9.9	73.3	14	1
L.I.A. Met.	0.9	26.9	3	17.4	49.0	36	1
Natural Res. College	1.2	35.9	3	36.7	56.4	65	1
Nkhotakota Met	23.6	20.0	118	27.7	39.9	69	5
Salima Met	1.3	8.8	15	8.7	27.1	32	1
NORTHERN REGION							
Chikangawa forest	4.7	28.4	17	41.8	61.8	68	2
Chitipa Met	3.7	19.0	19	3.7	31.1	12	1
Karonga Met.	0.0	8.6	0	0.0	13.4	0	0
Mzimba Met	0.2	18.1	1	16.3	35.6	46	0
Mzuzu Met.	6.9	31.7	22	134.7	86.1	156	4
NkhataBay Met.	32.9	116.6	28	53.4	255.1	21	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 2 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	26.9	15.9	30.2	14.9	1.7	75	3.8	3.2	4.5
CHICHIRI	27.2	18.1	30.9	16.4	0.8	70	3.9	3.2	4.5
CHILEKA	30.6	20.7	24.1	18.8	2.3	70	4.5	3.8	4.5
NTAJA	31.4	20.8	33.6	19.4	2.8	63	4.9	4.2	4.5
CHITEDZE	30.3	13.3	32.8	17.0	1.0	57	4.3	3.6	4.5
CHITIPA	31.6	17.0	32.6	16.6	3.9	48	5.7	5.1	4.5
DEDZA	25.3	16.3	26.7	13.8	1.9	67	4.1	3.4	4.5
KARONGA	33.9	24.0	35.0	23.0	2.2	54	8.9	7.2	10.9
K I A	29.6	17.9	32.2	16.0	1.9	60	4.6	3.9	4.5
MANGOCHI	32.9	22.0	35.4	20.0	1.3	64	4.6	3.9	4.5
MZIMBA	29.4	18.1	30.1	15.6	1.3	57	4.5	3.8	4.5
MZUZU	27.5	16.2	29.6	14.5	2.2	70	4.1	3.5	4.5
NGABU	37.6	24.5	40.2	23.0	3.8	56	10.1	8.4	11.0
NKHATA BAY	32.7	20.9	35.1	19.9			5.4	4.7	4.5
NKHOTAKOTA	31.3	23.5	33.8	21.0		59	4.4	3.7	4.5
SALIMA	33.0	23.1	34.6	21.0	2.6	57	5.3	4.6	4.5
THYOLO	29.8	18.6	32.6	17.0	1.3	69	4.3	3.6	4.5

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