# 10-Day Rainfall & Agromet Bulletin

## Department of Meteorological Services

Period: 21 – 30 April 2005 Season: 2004/2005 Issue No.21

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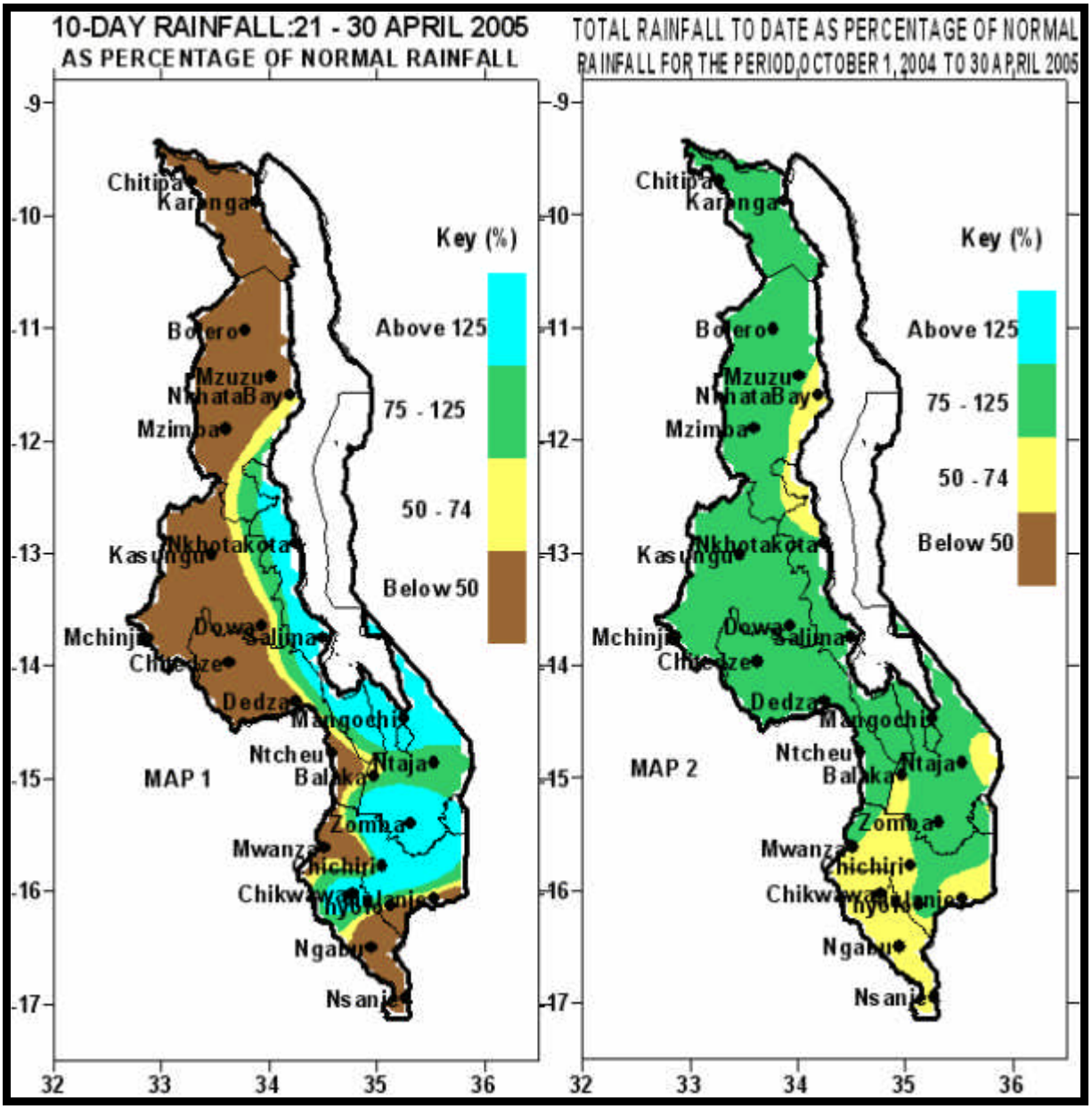
## HIGHLIGHTS

- **Mostly dry weather experienced in the last days of April…**
- **National maize production for 2004/05 dropped by 24% in 2nd round …**
- **Most areas registered normal cumulative rainfall amounts during 2004/05 season..**
- **Occasional normal winter rains expected over highlands and lakeshore areas…**

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## . WEATHER SUMMARY

### 1.1 RAINFALL

During the second 10-days of April 2005, a convergence ahead of pressure rises affected Malawi. As a result some parts of the country particularly southern highlands and some lakeshore areas received rainshowers and thunderstorms with moderate to heavy rainfall amounts. Makoka Met with 81.6mm on 27th April reported the highest amount in 24 hours. Other areas that registered 10-day total rainfall amounts above 30mm during the period included Nkhata Bay Met 80.9mm, Dwangwa Sugar 65.5mm, Zomba RTC 55.6mm, Bvumbwe 41.1mm, Chancellor College 39.1mm and Salima Met 37.2mm Otherwise most areas recorded 10-day rainfall amounts ranging from 0 to 28mm (Table 1 and Map 1).

10-day rainfall totals as a percentage of normal indicate that much above normal rainfall was received around Zomba where Makoka recorded 722%, Zomba RTC 556% and Chancellor College 296%.

Despite the drought by 30th April 2005 cumulative rainfall performance showed that most areas of Malawi had registered seasonal rainfall amounts ranging from 75 to 125% of the long term average rainfall amounts. However, in southern Malawi, cumulative rainfall performance shows below normal cumulative rainfall (below 75% of the expected rainfall) amounts has been received in lower Shire, some parts of Blantyre, Mulanje and Mwanza while along the lakeshore below normal rainfall situation existed in some parts of Nkhota Kota and Nkhata Bay districts. See **Map 2 and Table 1 for more details**.

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

## . MEAN AIR TEMPERATURE

Mean maximum temperatures over the country indicated that hot temperatures continued in most pasts of Malawi during the last 10-days of April 2005. Observed mean maximum temperature ranged between 24ºC and 34ºC. Higher mean maximum temperatures above 30ºC were mainly recorded in Shire valley and along the lakeshore. The highest maximum temperature was recorded at Ngabu, 39.4°C.

## . MEAN DAILY WIND SPEEDS

Mean daily wind speeds at a height of 2 meters above ground were generally light. The average values ranged from 0.9m/s (3.2km/hr) at Chitedze to 3.5m/s (12.6km/hr) at Chileka Airport. See Table 2 for more details.

## . MEAN RELATIVE HUMIDITY

Mean Relative Humidity values during the period ranged from 62% at Monkey Bay in the south to 80% at Nkhata Bay in the north giving a 10-day national average of 69%. This was an improvement compared to the second 10-days of April 2005 when a national average was 64%.

## . AGROMETEOROLOGICAL ASSESSMENT

Good rainfall amounts that were received in some parts of the country apart from supporting winter cropping activities improved soil moisture reserves and water resources particularly over southern highlands and along the lakeshore. Harvesting of maize in the south and some parts of the centre was finalising while elsewhere the crop had reached harvesting stage.

### 2.1 OVERVIEW OF 2004-05 SEASON

The 2004/2005 crop growing season started very well, with above average rains in most parts of the country through December and most of January. This raised hopes for good harvests despite the various problems that farmers experienced in obtaining access to inputs, especially basal dressing fertilizers. However, the rainfall situation drastically turned around at the end of January, when many parts of the country started experiencing dry spells that lasted for more than one month in most parts of the country particularly over the south and other parts of the centre. The situation was slightly better in the north though localised areas were also hit by dry spells. The dry spells occurred when most of the crops were at critical stages of development thereby adversely affecting the yields of most of the crops. Maize is one of the worst affected crops. Total maize production dropped by 24% from the first estimate of 1,724,391 MT in January 2005, to 1,306,983 MT during the second round in March. This also represented a drop of about 25% from last year's total maize production of 1,733,125 MT.

## . FORECAST FOR MAY

A series of high pressure systems will periodically induce cool and fairly moist south easterly air into Malawi. Therefore, occasional light rains are expected particularly over highlands and along the Lakeshore areas during the month of May 2005.

THIS IS THE LAST 10—DAY BULLETIN FOR 2004-05 SEASON

## TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF APRIL 2005: PERIOD 21 – 30

| 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. | 41.1 | 16.9 | **243** | 768.4 | 1060.4 | **72** | 4 |
| Chancellor College | 39.1 | 13.2 | **296** | 1056.3 | 1393.2 | **76** | 2 |
| Chichiri Met. | 7.7 | 16.7 | **46** | 861.5 | 1070.4 | **80** | 3 |
| Chikwawa Boma | 27.2 | 10.7 | **254** | 431.0 | 733.5 | **59** | 1 |
| Chileka Airport | 0.0 | 3.5 | **0** | 495.4 | 878.1 | **56** | 0 |
| Kasinthula Res. Stn. | 8.2 | 10.7 | **77** | 499.4 | 708.4 | **70** | 1 |
| Liwonde Township | 9.5 | 8.3 | **114** | 752.2 | 830.0 | **91** | 1 |
| Lujeri Tea Estate | 13.9 | 63.0 | **22** | 1194.8 | 1983.7 | **60** | 4 |
| Makoka Met | 81.6 | 11.3 | **722** | 885.2 | 996.0 | **89** | 1 |
| Mangochi Met. | 26.5 | 8.9 | **298** | 691.7 | 826.2 | **84** | 3 |
| Mimosa Met. | 6.9 | 43.8 | **16** | 924.2 | 1445.7 | **64** | 3 |
| Monkey Bay Met. | 16.9 | 4.1 | **412** | 827.8 | 916.8 | **90** | 1 |
| Mulanje Boma | 2.0 | 34.2 | **6** | 991.3 | 1611.6 | **62** | 1 |
| Nchalo Illovo Sugar | 2.3 | 10.1 | **23** | 397.0 | 678.3 | **59** | 2 |
| Ngabu Met. | 2.5 | 11.1 | **23** | 453.0 | 766.4 | **59** | 2 |
| Ntaja Met. | 5.1 | 10.5 | **49** | 730.9 | 892.1 | **82** | 1 |
| Satemwa Tea Est. No.1 | 7.7 | 22.3 | **35** | 1001.4 | 1284.1 | **78** | 2 |
| Toleza Farm | 4.6 | 10.2 | **45** | 641.5 | 841.6 | **76** | 1 |
| Thyolo Boma | 10.1 | 24.7 | **41** | 683.1 | 1148.4 | **59** | 1 |
| Thyolo Met | 22.0 | 23.3 | **94** | 1001.9 | 1143.2 | **88** | 2 |
| Zomba RTC | 55.6 | 10.0 | **556** | 1193.5 | 1200.7 | **99** | 2 |
| **CENTRAL REGION** | | | | | | | |
| Chitedze Met. | 0.9 | 8.4 | **11** | 794.4 | 905.4 | **88** | 1 |
| Dedza Met | 1.2 | 10.2 | **12** | 704.6 | 936.4 | **75** | 1 |
| Dowa Agric | 0.0 | 4.9 | **0** | 746.4 | 862.1 | **87** | 4 |
| Dwangwa Sugar Corp. | 65.5 | 36.3 | **180** | 806 | 1394.7 | **58** | 4 |
| K.I.A. Met. | 1.4 | 4.0 | **35** | 871.4 | 827.7 | **105** | 1 |
| Kasungu Met | 0.0 | 8.0 | **0** | 864.8 | 848.7 | **102** | 0 |
| Natural Res. College | 1.7 | 11.5 | **15** | 902.8 | 848.8 | **106** | 1 |
| Ntcheu - Nkhande | 0.0 | 8.1 | **0** | 1045.4 | 1058.5 | **99** | 0 |
| Salima Met | 37.2 | 11.1 | **335** | 896.1 | 1258.3 | **71** | 2 |
| **NORTHERN REGION** | | | | | | | |
| Bolero Met | 0.0 | 4.7 | **0** | 658.6 | 728.2 | **90** | 0 |
| Chitipa Met | 0.0 | 9.0 | **0** | 1078.5 | 979.2 | **110** | 0 |
| Karonga Met. | 9.3 | 33.9 | **27** | 1076.7 | 1049.6 | **103** | 2 |
| Mzimba Met | 0.0 | 8.7 | **0** | 928.4 | 883.6 | **105** | 0 |
| Mzuzu Met. | 17.7 | 59.2 | **30** | 950.5 | 1184.1 | **80** | 5 |
| NkhataBay Met. | 80.9 | 146.3 | **55** | 968.6 | 1637.1 | **59** | 6 |

## TABLE 2: AGROMETEOROLOGICAL PARAMETERS

## FOR DEKAD 3 OF APRIL 2005

| STATION | MAX TEMP (°C) | MIN TEMP (°C) | ABS MAX (°C) | ABS MIN (°C) | WIND SPEED m/s | RH % |
|---|---|---|---|---|---|---|
| BVUMBWE | 25.7 | 12.1 | 30.5 | 7.9 | 1.4 | 73 |
| BOLERO | 27.9 | 16.8 | 30.3 | 14.6 | 1.9 | 68 |
| CHICHIRI | 26.2 | 16.3 | 31.0 | 10.0 | 1.0 | 69 |
| CHILEKA | 29.1 | 19.0 | 33.6 | 16.0 | 3.5 | 63 |
| NTAJA | 29.1 | 19.1 | 32.5 | 14.9 | 2.0 | 70 |
| CHITEDZE | 27.9 | 15.1 | 30.3 | 11.9 | 0.9 | 65 |
| CHITIPA | 27.4 | 17.4 | 28.9 | 16.9 | 3.0 | 71 |
| DEDZA | 23.7 | 15.1 | 25.5 | 10.9 | 1.2 | 71 |
| KASUNGU | 28.2 | 16.7 | 30.1 | 13.0 | 2.1 | 68 |
| KARONGA | 30.1 | 21.4 | 32.0 | 18.0 | 2.0 | 63 |
| K I A | 26.5 | 17.7 | 29.3 | 10.4 | 1.9 | 70 |
| MAKOKA | 27.2 | 16.2 | 30.5 | 13.3 | 1.5 | 74 |
| MANGOCHI | 30.9 | 19.9 | 34.4 | 15.8 | 1.6 | 68 |
| MIMOSA | 33.1 | 15.0 | 34.9 | 14.5 | 1.3 | 74 |
| MONKEY BAY | 30.7 | 20.8 | 32.8 | 17.4 | 2.1 | 62 |
| MZIMBA | 26.9 | 17.4 | 29.5 | 15.2 | 1.3 | 67 |
| MZUZU | 24.6 | 15.5 | 27.4 | 12.0 | 1.9 | 78 |
| NGABU | 33.9 | 21.3 | 39.4 | 18.8 | 1.8 | 63 |
| NKHATA BAY | 29.1 | 19.7 | 31.7 | 18.7 | 2.0 | 80 |
| SALIMA | 29.5 | 21.1 | 31.7 | 20.0 | 2.6 | 67 |
| THYOLO | 27.4 | 16.6 | 31.7 | 11.6 | 1.3 | 75 |

**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