

Malawi 10-day Weather and Agrometeorological Bulletin

"In support of National Early Warning Systems and Food Security"



Period: 21 – 31 December 2024

Season: 2024/2025

Release date: 03 January 2025

Issue No.09

HIGHLIGHTS

- Hot and dry conditions were dominant over Malawi...
- Replanting in progress over more areas...
- Expected improved rainfall situation over more areas...



Figure 1: Observed dekadal and cumulative seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 21 to 31 December 2024, most areas experienced very hot and dry conditions but towards the end of the period under review the situation improved as scattered thunderstorms and rains were experienced with locally heavy rains mainly over the south due unstable easterly airmass which were later converging with north westerlies.

1.1 RAINFALL SITUATION

During the period under review, deficiency of rainfall was dominant and the country observed a heatwave of more than 7 days. Thunderstorms and locally heavy rains were experienced mainly over the south towards the end of the review period.

Some of the stations that has recorded at least 50mm of rainfall during the third dekad of December 2024 include: Namwera Agriculture in Mangochi with 138.5mm in 2 rainy days, Mpemba Veterinary in Blantyre with 86.4mm in 4 rainy days, Dwangwa Sugar Company in Nkhotakota recorded 85.6mm in 2 rainy days, Mulanje Boma recorded 74.5mm in 3 rainy days, Thyolo Boma recorded 69mm in 4 rainy days, Salima Meteorological station recorded 64.9mm in 3 rainy days, Chikweo Agriculture in Machinga recorded 64.6mm in 4 rainy days, Lujeri Tea Estate recorded 57.9mm in 5 rainy days and Dowa Agriculture recorded 53.7mm in 1 rainy day.

Spatial distribution of the actual recorded rainfall amounts is shown in figure 2 below.



Figure 2: Observed dekadal rainfall for Malawi, 21-31 December 2024

The overall rainy days distribution which ranged from 1 to 5 during the period under review is shown in figure 3 below with Lujeri Tea Estate, Lifuwu Agricultural Research station, Thuchila Agriculture and Chileka Airport registering the highest for the period of 5 rainy days.



Figure 3: Dekadal rainy days for Malawi, 21-31 December 2024

2024/2025 ONSET STATUS

By December 31st 2024, the onset of the season, as defined by DCCMS, still had not yet been observed in most areas of Malawi due to prolonged dry spells which have been experienced over the country. The definition states that "*the first day or 3 consecutive days receiving 25mm or more and not followed by 9 consecutive dry days within the next 21 days*". Most areas remain under monitoring as the southern part of the country has registered a good number of stations with onset observed compared to central and northern areas.



Figure 4: 2024/25 Onset status

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1.2 AIR TEMPERATURE

Most areas experienced generally very hot conditions during the period 21 to 31 December 2024. The range of average daily maximum temperature was 27.9°C reported from Dedza Meteorological station to 40.2°C from Ngabu Meteorological station in Chikwawa where the absolute maximum temperature of 42.7°C was also recorded on 23rd December 2024. On the other hand, average daily minimum temperatures ranged from 16.2°C at Mzuzu International Airport in Mzimba to 27.6°C from Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 21 to 31 December 2024, air over Malawi was dry to relatively moist. Daily average Relative Humidity values recorded from various weather stations across the country had ranged from 44% at Chitedze Research Station to 70% at Dedza Meteorological Station.

1.4 WIND SPEEDS

During the period under review, most parts of Malawi experienced generally light wind speeds with occasional gusty winds during thundery activities. The daily average wind speed measured at a height of two metres above the ground level across the country ranged from 1.8 km per hour at Makoka Research station to 11.2km per hour at Chileka International Airport in Blantyre.

1.5 SUNSHINE HOURS

Long hours of bright sunshine were observed over Malawi during the period 21 to 31 December 2024.

2. AGROMETEOROLOGICAL ASSESSMENT

Due to the dry conditions experienced over most areas, crops experienced different degrees of water stressed conditions which led to wilting over some areas and also created a favorable condition for pests like the Fall Armyworm (FAW) to attack crops (refer to figure 5). For the past few days farmers have been busy with planting while some are replanting. After few days of rainfall activities some crops are now performing well especially those under conservation agriculture (e.g applied with manure)



Figure 5: Water stressed crop being attacked by FAW in Machinga.

3. PROSPECTS FOR 2024/2025 SEASON

The 2024-2025 rainfall season is expected to be influenced by weak La Nina conditions that have been established over eastern-central equatorial Pacific Ocean. Global models project that these conditions are likely to persist for a considerable part of the season.

The rainfall forecast for the 2024/2025 season is that:

"During October to December 2024, Rainfall amounts across most areas of the country are anticipated to be normal to below-normal, except for specific areas in central and northern Lakeshore districts, where they may experience normal to above-normal precipitation.

During January to March 2025, expect normal to above-normal total rainfall amounts over most areas with possibility of outright above normal rainfall in January 2025."

Illustration of the forecast is given in Figure 6-below with map (a) and map (b) showing sub-seasons October November December (OND) and January February March (JFM), respectively.

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Figure 6: Forecast categories for OND and JFM

At national level, there are higher chances of normal to above normal cumulative seasonal rainfall amounts over most parts of the country.

For the month of January 2025, above normal rainfall amounts are anticipated over majority of areas of the country with pockets of normal conditions. Refer Figure 7 below map (a). The actual anticipated rainfall amounts are generally in the range 200 to 350 mm as shown in map (b) of Figure 7 below.



Figure 7: January 2025 rainfall forecast (a) categories and (b) amounts

In terms of temperature, generally cooler than normal conditions are anticipated during the month of January 2025 over most areas of the country as shown in map (a) in Figure 8 below. Lakeshore and southern areas are expected to have temperatures of around 30 to 32 Degrees Celsius as captured in map (b) in Figure 8 below.



Figure 8: January 2025 temperature forecast

4. OUTLOOK FOR 01 - 10 JANUARY 2025

A significant pick in rainfall activities is anticipated across the country. Normal to Above normal dekadal total rainfall is expected almost across the country as shown in figure 9. Farmers are advised to properly utilize the moisture expected during the JFM sub season by planting early to medium maturing verities.



Figure 9: Dekadal rainfall outlook for Malawi for 01-10 January 2025