

Malawi 10-day Weather and Agrometeorological Bulletin

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



Period: 01 – 10 December 2024

Season: 2024/2025

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HIGHLIGHTS

- Reduced rainfall activities experienced over Malawi...
- Planting in progress over central and northern areas...
- Increased rainfall activities anticipated mainly over southern areas due to Tropical Cyclone CHIDO...



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

1.0 WEATHER SUMMARY

During the period 01 to 10 December 2024, mostly dry conditions persisted over Malawi. However, unstable easterly air mass resulted in localized thunderstorms and rains.

1.1 RAINFALL SITUATION

During the first dekad of December 2024, there was persistence of deficiency of rainfall over most areas in terms of spatial and temporal distribution though some areas received localised heavy rains.

Stations that recorded at least 40mm of rainfall during the reporting period included Euthini Agriculture in Mzimba with 89.1mm in 3 rainy days, Chitedze Research in Lilongwe with 66.9mm in 2 rainy days, Chileka Agriculture in Lilongwe recorded 64.2mm in 2 rainy days, Ntchisi Boma received 57.1mm in 3 rainy days, Ntcheu – Nkhande received 56.6mm in 1 day, Chikangawa forest in Mzimba recorded 46.9mm in 3 rainy days, Kasiya Agriculture in Lilongwe recorded 44.8mm in 2 rainy days, Mpemba Veterinary in Blantyre recorded 42.1mm in 2 rainy days, and Chancellor College in Zomba recorded 40.5mm in 2 rainy days.

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



Figure 2: Observed dekadal rainfall for Malawi, 01-10 December 2024

The overall rainy days distribution from 01 to 10 December 2024 is shown in figure 3 below as Rumphi Boma and Namwera Agriculture recorded the highest number of 4 rainy days. The majority of stations that received rainfall recorded 1 to 3 rainy days Most areas over the south did not record any rainy days as.



Figure 3: dekadal rainy days for Malawi, 01-10 December 2024

2024/2025 ONSET STATUS

By December 10th 2024, the onset of the season, as defined by DCCMS, had not yet been observed in most areas of Malawi though some areas have been receiving heavy rains but due to prolonged dry spells being experienced over the country the onset, using DCCMS definition, has been observed over just few areas only from Lilongwe, Mwanza, Mangochi, Dedza, Chikwawa, Nkhata Bay and Mulanje, as shown in the figure below. 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". Approximately half of the country remains under monitoring; while they have received the required amount of rainfall, the condition regarding dry spells has yet to be met.



1.2 AIR TEMPERATURE

Malawi experienced generally hot to very hot conditions during the period 01 to 10 December 2024. The highest daily average maximum temperature reported for the period was 37.1°C from Mangochi Meteorological station. On the other hand, daily average minimum temperatures had ranged from 16.2°C at Chitedze Meteorological station in Lilongwe to 24.7°C at Monkey Bay Meteorological station, in Mangochi.

1.3 RELATIVE HUMIDITY

During the period 01 to 10 December 2024, air over Malawi was relatively moist. Daily average Relative Humidity values recorded from various weather stations across the country had ranged from 52% at Kamuzu International Airport to 73% at Mzuzu Meteorological stations in Mzimba.

1.4 WIND SPEEDS

During the period under review, most parts of Malawi experienced generally light wind speeds with isolated cases gusty winds especially during thundery activities. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 1.4 km per hour at Bolero Meteorological station in Rumphi to 9.7 km per hour at Chileka Meteorological station in Blantyre and Salima Meteorological station.

1.5 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 01 to 10 December 2024. Daily average values had ranged from 6.4 hours at Bvumbwe to 9.3 hours at Karonga Meteorological station and consequently the amount of Solar Radiation had ranged from 8.4 to 12.3 cal/cm²/day.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, the main on-farm activities over Malawi have been planting and for others were applying basal dressing fertilizer over southern areas while for central and northern areas were land preparation and planting. Furthermore, farmers are still acquiring various farm inputs in major outlets across the country. Stocking of various farm inputs is underway across the country under the Malawi Government's Affordable Inputs Program (AIP) initiative. -

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 Page 3 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 5 below with map (a) and map (b) showing sub-seasons October November December (OND) and January February March (JFM), respectively.



Figure 5: 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 December 2024, normal to above normal rainfall amounts are anticipated over majority of areas of the country with above normal episodes over Lakeshore and northern areas. Pockets of below normal conditions are expected in some southern, central and southern areas. Refer figure 6 below map (a). The actaul anticipated rainfall amounts are generally in the range 100-250 mm as shown in figure b map (b) below.



Figure 6: December 2024 rainfall forecast (a) categories and (b) values

In terms of temperature, generally normal conditions are anticipated during the month of November over most areas of the country as shown in map (a) in figure 7 below. This

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generally entails temperatures of around 36 Degrees Celsius for lower Shire River Valley areas while temperatures of 30 to 32 Degree Celsius elsewhere as captured in map (b) in figure 7 below.



Figure 7: December 2024 temperature forecast

4. OUTLOOK FOR 11 - 20 DECEMBER 2024

Rainfall activities are anticipated to pick across the country during the period 11-20 December 2024 partly due to the influence of Tropical Cyclone Chido that is expected to affect parts of the southern region of the country. However, after Tropical Cyclone Chido, most areas except the furthest northern areas will be dry.

Furthermore, livestock farmers are advised to provide water to their stock at regular times to avoid stress to their stock.



Figure 8: Dekadal rainfall outlook for Malawi for 11-20 December 2024