

Livestock Weather Bulletin

July- September 2025

Maiden Edition

A Publication of Nigerian Meteorological Agency

© **2025**

Our Mandate

To provide for the regulation of meteorology and for related matters.

Our Vision

To be a World Class provider of weather and Climate services for safety and sustainable national socio-economic development.

Our Mission

To observe Nigerian Weather and Climate and provide Meteorological, Hydrological, and Oceanographic Services in support of National needs and International Obligations

Who We Serve

Aviation, Agriculture, Building and Construction, Commerce, Health, Hydrology, Marine, Oil and Gas, Sports, Social Events, Power, and Energy, Telecommunication and more.....

EDITORIAL

PUBLISHER

Professor Charles Anosike

(Director General/Chief Executive Officer, Nigerian Meteorological Agency)

Chief Editor

Mrs Gloria Onyegbule

Director, Applied Meteorological Services

Deputy Chief Editor

Dr. James Ijampy Adamu

Assistant General Manager & TAI-DG/CEO

EDITORIAL TEAM

Mr. Ahmed Alfa Ibrahim

Assistance General Manager

Mr Kayode Oyekan

Assistant Chief Meteorologist & PA – DG/CEO

Mrs. Blessing Aganbi

Principal Meteorologist

Mr. Mustapha Baba Aji

Principal Meteorologist

Mr. Ahmad Aboki Usman

Principal Meteorologist

Mrs. Labake Olatunji

Principal Meteorologist

Mr. Abdulrahman Garba Abdulkarim

Principal Meteorologist

Mr Elioenai Anzizi

Principal ICT Officer

Mr Martin Nnaji-for-Ifeakandu

(ICT Officer I)

TABLE OF Contents

Preamble

iii

JULY

01

1.0 Rainfall Pattern Across Nigeria in July 2025

2.0 Soil Moisture Conditions in July 2025

3.0 Temperature Distribution across Nigeria in July 2025

4.0 Normalized Difference Vegetation Index (NDVI)

5.0 Weather/ Agricultural Outlook for August 2025

AUGUST

09

1.0 Rainfall Pattern Across Nigeria in August 2025

2.0 Soil Moisture Conditions in August 2025

3.0 Temperature Distribution across Nigeria in August 2025

4.0 Normalized Difference Vegetation Index (NDVI)

5.0 Weather/ Agricultural Outlook for September 2025

SEPTEMBER

16

1.0 Rainfall Pattern Across Nigeria in September 2025

2.0 Soil Moisture Conditions in September 2025

3.0 Temperature Distribution across Nigeria in September 2025

4.0 Normalized Difference Vegetation Index (NDVI)

5.0 Weather/ Agricultural Outlook for October 2025

Preamble



Climate change presents a growing challenge to Nigeria's agricultural sector, particularly the livestock subsector. Variability in rainfall, rising temperatures, prolonged dry spells, and extreme weather events affect animal health, feed and water availability, and overall productivity. Recent studies show that cattle mortality rates in northern Nigeria have increased by 15% during periods of extreme heat, directly impacting local food supply. Heat stress reduces fertility, milk yield, and growth rates, while erratic rainfall alters grazing conditions and the quality of pastures. These impacts threaten food security, farmer livelihoods, and the sustainability of livestock production systems. To address these challenges, farmers are adopting drought resistant forage crops and investing in improved water management systems to sustain livestock productivity.

To help farmers cope with these changes, the Livestock Weather Bulletin is produced each month to review the climate and highlight its

likely effects on livestock. It provides a comprehensive overview of weather conditions, including rainfall, temperature, soil moisture, the Thermal Comfort Index (THI)—a measure of how comfortable the temperature and humidity levels are for livestock—and the Normalized Difference Vegetation Index (NDVI), which indicates plant health and pasture availability. The bulletin also presents forecasts of key climatic parameters such as rainfall, maximum and minimum temperature, and relative humidity, alongside their implications for livestock production across the country.

Importantly, the bulletin also serves as an early warning tool, integrating climate forecasts with livestock health indicators to anticipate risks such as heat stress, water scarcity, and pasture decline. This timely information empowers farmers to take preventive measures, protect animal health, and minimize losses.

I believe the information provided in this bulletin has the potential to improve livestock health, enhance resilience to climate variability, and support farmers in maximizing profits by enabling them to adjust feeding schedules, optimize herd sizes, and plan for resource allocation based on forecasted conditions.

Professor Charles Anosike

*Director General/CEO NiMet &
Permanent Representative of Nigeria
with WMO*

July 2025

Summary

This edition of the Livestock Weather Bulletin offers livestock farmers and managers a clear and actionable summary of rainfall forecasts, temperature trends, and drought risk across Nigeria for July 2025. The bulletin highlights regions most at risk of drought and recommends optimal grazing strategies to minimise livestock losses, as well as measures to reduce the impact of heat stress and water scarcity on animals. Drawing on real-time meteorological data and expert analysis, this bulletin provides region-specific advice to help farmers adapt their practices, ensuring each section delivers information directly relevant to effective decision-making and day-to-day operations.:

- In July 2025, rainfall amounts across Nigeria ranged from 36.8 mm to 757.2 mm, with the highest amount recorded in Yenagoa (Bayelsa State) and the lowest, in Ikeja (Lagos State).
- Daytime temperatures ranged from 25.3 to 34.4 °C in the north and central states, and 25.0 to 31.0 °C in the southern region.
- Analysis of the Livestock Comfortability Index (LCI) indicates the occurrence of mild to moderate heat stress conditions across the country, with likely negative effects on feed intake, well-being, reproduction, and productivity of livestock.
- Forecasts indicate heavier rainfall in the southern states (100 to 480 mm), while the central and northern states are expected to receive moderate to heavy rainfall (200 to 480 mm).

- Maximum daytime temperatures across the country are expected to range from 27 °C to 35 °C.
- Rotational grazing is recommended to manage regenerating pastures, while in the southern states, measures to reduce humidity-related risks, such as parasites and waterlogging, are necessary.
- For more information, contact NiMet via www.nimet.gov.ng or download the NiMet Weather App, available on Google Play and the Apple App Store.

1.0 Rainfall Pattern Across Nigeria in July 2025

1.1 Rainfall Amount

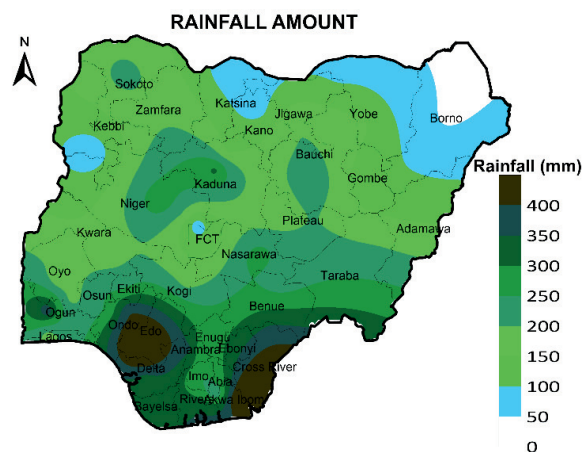


Figure 1: Rainfall Amount across Nigeria in July 2025.

Rainfall across Nigeria in July 2025 is shown in Figure 1. Rainfall was more widely distributed than in previous months, ranging from 36.8 mm to 757.2 mm, with notable spatial variation. The highest total rainfall was recorded in Yenagoa (Bayelsa State), while the lowest occurred in Ikeja (Lagos State).

In the South-West, rainfall was lower due to dry spells, causing moisture stress and vegetation wilting. Livestock are expected to cope with this short-term deficit, as precipitation is forecast to improve in August, which should restore pasture conditions.

In contrast, the South-East received ample rainfall in both inland and coastal zones, promoting pasture growth and availability. However, the persistent wet conditions increased the risk of livestock disease outbreaks due to elevated humidity and waterlogging.

2.0 Soil Moisture Conditions Across Nigeria in July 2025

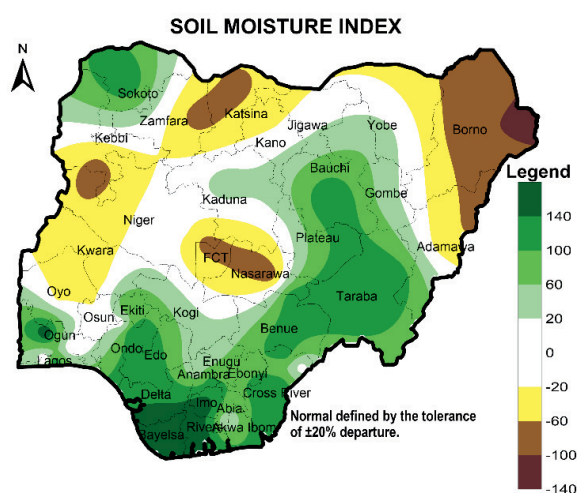


Figure 2: Soil Moisture Index (SMI) across Nigeria in July 2025.

Figure 2 illustrates the distribution of soil moisture conditions across Nigeria in July 2025. The soil moisture in most parts of the country was normal to above normal (surplus). In contrast, below-normal (deficit) soil moisture conditions were observed in parts of Borno, Yobe, Katsina, Zamfara, Niger, Nasarawa, Kwara, and Oyo states, as well as the Federal Capital Territory (FCT). Notably, Kwara State experienced pronounced dry spells, leading to widespread soil moisture stress and localized crop failures.

Implications for pasture availability

- Surplus soil moisture in parts of northern and central states will support pasture regrowth and improve feed availability in the affected states.
- Areas with normal to below-normal soil moisture may experience uneven pasture recovery, limit forage and forcing animals to range further
- In the southern states, above-normal soil moisture is expected to promote healthy pasture growth. Prolonged wet conditions in these areas may cause waterlogging and increase risks of foot rot and parasites.

3.0 Temperature Distribution Across Nigeria in July 2025

3.1 Maximum (Daytime) Temperature Distribution

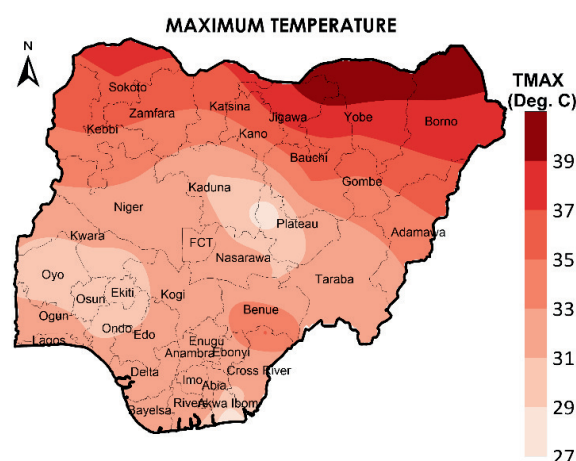


Figure 3: Maximum Temperature Distribution Across Nigeria in July 2025.

As shown in Figure 3, daytime temperatures decreased significantly in July 2025 compared to the previous month.

Northern States (Sokoto, Kebbi, Zamfara, Katsina, Kano, Jigawa, Yobe, Borno): Maximum temperatures in the northern states ranged between 30°C and 34.4°C, reflecting the typical conditions associated with the establishment phase of the rainy season in the semi-arid Sahel. Under these conditions, young animals, particularly poultry and small ruminants, are more susceptible to disease due to the combined effects of heat stress and elevated humidity.

North-Central States (Niger, Kwara, Kogi, FCT, Benue, Plateau, Nasarawa, Taraba): Most place in north-central Nigeria recorded maximum temperatures between 25.3°C and 32.0°C. Plateau State was relatively cooler (25.3°C) than other states during the period. Temperatures here were lower compared to the north, but livestock may still experience moderate heat stress.

Southern States (Oyo, Ogun, Ondo, Ekiti, Osun, Edo, Rivers, Cross River, Akwa Ibom, Bayelsa, Delta, Lagos, Anambra, Enugu, Imo, Abia, Ebonyi):

The temperatures recorded in the southern states during the period ranged between 25°C and 31°C. These were lower compared to the northern and central states, due to cloud cover and coastal influences. Eket (Akwa Ibom State) recorded the lowest temperature (25.8°C) in the region. Cooler conditions in the south would help reduce heat stress, but combined with high humidity and rainfall, they can create an environment favourable for parasites and disease outbreaks (ticks, helminths, coccidiosis, and respiratory infections)

3.2: Minimum Temperature Distribution Across Nigeria in July

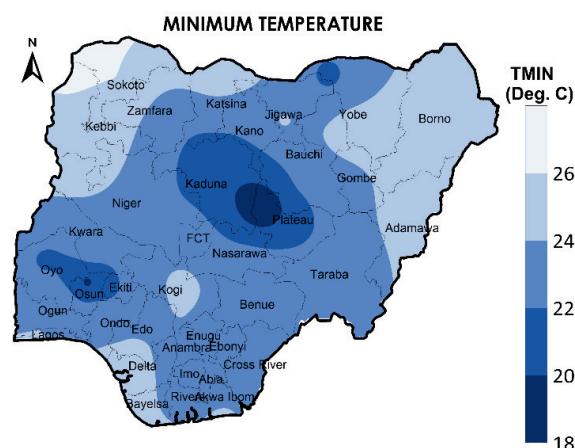


Figure 4: Minimum Temperature Across Nigeria in July 2025.

Figure 4 shows the minimum (nighttime) temperatures recorded across Nigeria in July 2025. During this period, minimum temperatures ranged from 17.7°C in Jos (Plateau State) to 24.8°C in Yola (Adamawa State). Nighttime temperatures were generally lower across Nigeria in July compared to June 2025. Such drops in nighttime temperature can predispose young animals and poultry to respiratory infections, especially where housing is poorly ventilated.

3.3 Livestock Comfortability Index (LCI) Across Nigeria in July 2025.

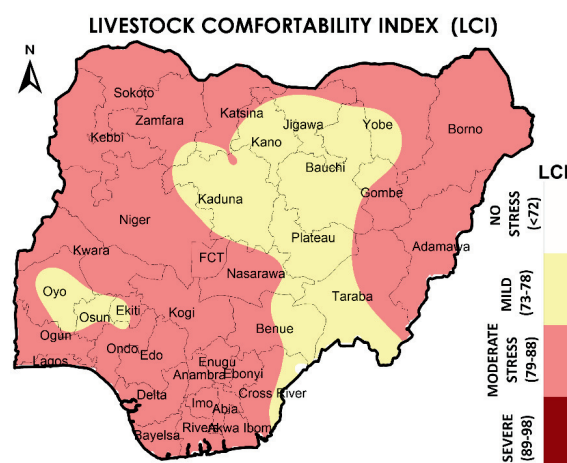


Figure 5: Livestock Comfortability Index for July 2025.

Figure 5 illustrates the Livestock Comfortability Index (LCI) across Nigeria in July 2025. The LCI serves as a relative indicator of livestock comfort under extreme temperature conditions and is useful for assessing potential impacts on animal performance.

During the period, mild to moderate heat stress was observed across most parts of the country, with notable implications for livestock production and health.

Implications for Livestock

- Animals commonly exhibit elevated respiratory rates and panting as thermoregulatory responses to dissipate excess body heat, resulting in increased energy expenditure.
- Feed intake is often reduced under heat stress conditions, leading to slower growth rates, poor body condition, and reduced overall productivity.
- Dairy cattle and beef cattle, and small ruminants: Heat stress may result in decreased milk yield and butterfat content, reduced carcass quality, and impaired reproductive performance, including disrupted oestrus cycles, lower conception rates, and increased embryonic loss.
- Poultry: Increased panting, lethargy, reduced feed consumption, lowered egg production, and poorer feed conversion efficiency are common impacts of heat stress on poultry birds.
- Beyond productivity losses, heat stress elevates water requirements and increases vulnerability to metabolic disorders and infectious diseases by suppressing immune function, thereby negatively affecting animal welfare and farm profitability.

4.0: Normalized Difference Vegetation Index (NDVI) Anomaly for July 2025

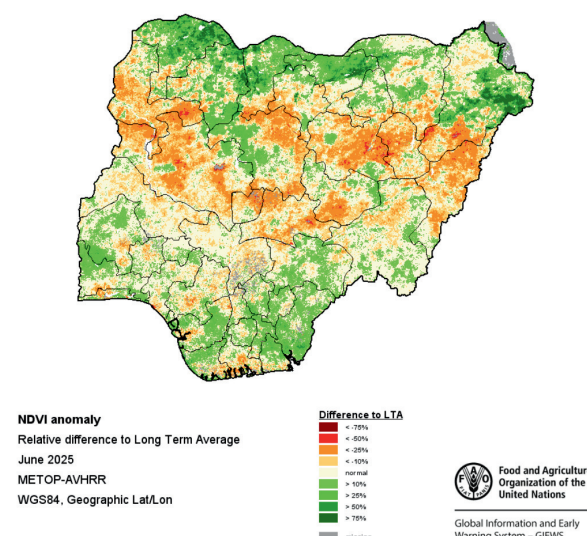


Figure 6: Normalized Difference Vegetation Index Anomaly for July 2025

The NDVI across Nigeria in July 2025 is shown in Figure 6. Dense and healthy vegetation is evident across the northern states and most parts of the southern states. In contrast, the central states and parts of the South-West recorded notable vegetation deficits. In the South-East inland and parts of the northern states, this condition is primarily linked to sustained rainfall, while the observed deficits in the South-West are largely attributed to prolonged dry spells during the period.

5.0 Weather/Agricultural Outlook for August 2025

5.1 Weather Forecast August 2025

In August 2025, a northward pull of the Inter Tropical Discontinuity (ITD) is expected to attain an average position of 20.1°N. This northward displacement will enhance moisture advection and velocity potential, creating favorable conditions for heavy rainfall across Nigeria.

5.1.1 Rainfall Forecast for August 2025

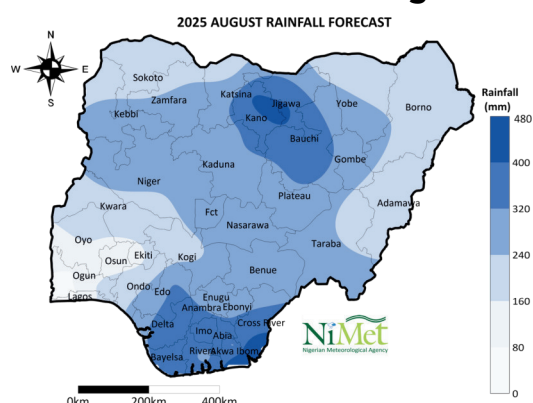


Figure 7: Rainfall Forecast for August 2025

The rainfall forecast across Nigeria for August 2025 is presented in Figure 7.

- **High Rainfall Amounts in the Southern States:** The forecast predicts 100mm to 480mm of rainfall in most parts of the southern states. While this level of rainfall ensures adequate water supply for pasture growth and livestock needs, it also poses significant risks of flash floods and river flooding.
- **Moderate to High Rainfall in the Central States:** The central states are forecast to receive 200 to 480 mm of rainfall.
- **Moderate to Heavy Rainfall in the Northern States:** The northern states are expected to record 200–480 mm of rainfall.

5.1.2 Implications of the Rainfall Forecast for Livestock

- **Southern States (Coastal & Inland):**
 - Heavy rainfall will promote lush pasture and forage growth, increasing feed availability for grazing animals
 - Rainfall may lead to pond flooding and waterlogged grazing areas
 - Increased risk of foot rot and parasitic infections among livestock.

• Central States:

- The expected weather conditions generally support pasture regeneration and surface water availability, creating favorable grazing conditions.
- Nevertheless, waterlogging in low-lying areas could increase the risk of foot rot and vector-borne disease.

• Northern States:

- The improved rainfall is beneficial for early pasture recovery and replenishment of water points, easing the pressure on livestock herders.

5.2 Maximum Temperature Forecast for August 2025

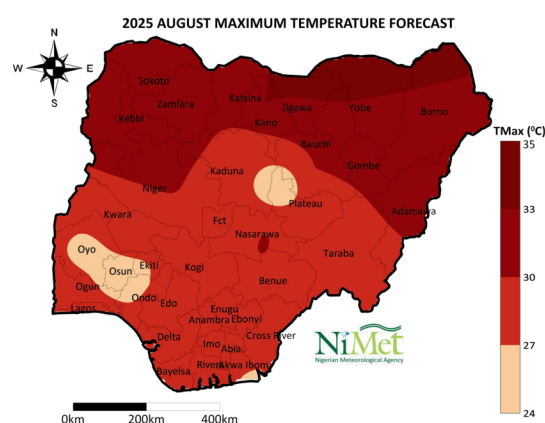


Figure 7: Maximum Temperature Forecast for August 2025

The predicted maximum temperature in different parts of Nigeria for August 2025 is presented in Figure 8. A maximum temperature range of 30 to 35 °C is anticipated across Sokoto, Jigawa, Yobe, Nasarawa, Benue, Niger, Borno, Adamawa, Taraba, Gombe, Bauchi, Kano, Katsina, Zamfara, and Kebbi States. A range of 24°C to 33 °C is expected in parts of Kaduna, Kogi, and the FCT, while the remaining parts of the country are likely to experience maximum temperatures between 24°C and 30 °C.

5.2.1 Implications of the Forecast Daytime Temperatures for Livestock.

- **Northern States - High Temperatures (30°C to 35°C)**
 - May expose livestock to moderate to severe heat stress, reducing feed intake, weight gain, fertility, and milk yield.
- **Central States - Moderate Temperatures (24°C to 33°C):**
 - Animals are likely to experience mild heat stress.
- **Southern States - Lower Temperatures (24°C to 30°C)**
 - Favorable conditions, although humidity may increase the risk of parasite infestation and disease outbreaks.

5.3 Minimum Temperature Forecast for August 2025

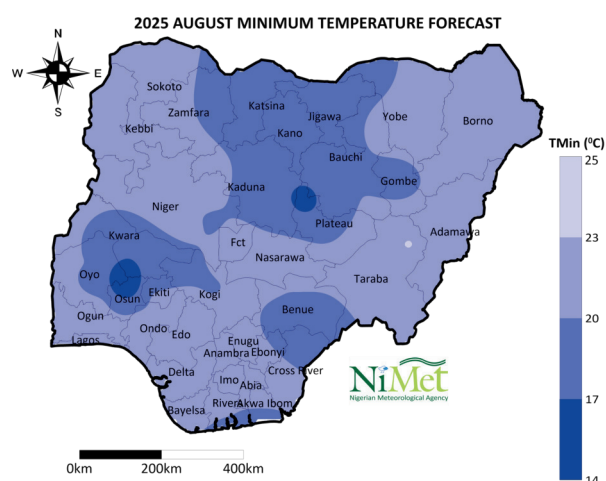


Figure 9: Minimum Temperature Forecast for August 2025

The minimum (Nighttime) temperature forecast across Nigeria for August 2025 is presented in Figure 9. Minimum temperatures between 14°C and 25 °C are expected across the country during the period.

5.3.1 Implications of the Forecast August 2025 Nighttime Temperatures for Livestock

- Nighttime temperatures are generally comfortable for most livestock
- Young animals and poultry in cooler areas (14–17°C) may face respiratory risks, especially in damp or poorly ventilated housing.

5.4 Relative Humidity Forecast for August 2025

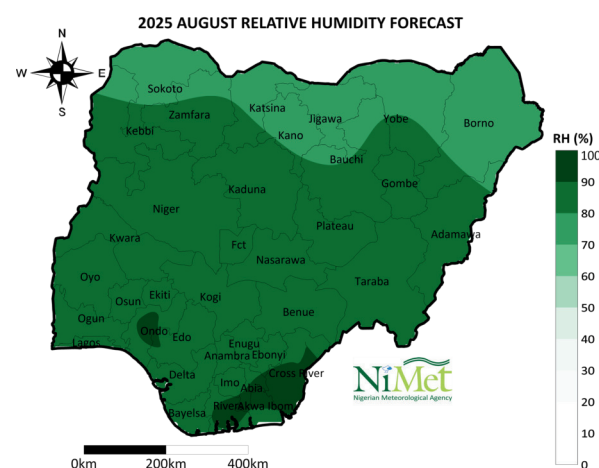


Figure 9: Relative Humidity Forecast for August 2025

The forecast for August 2025, as shown in Figure 10, indicates a nationwide increase in relative humidity, with the highest levels expected across the southern and central states.

5.4.1 Implications of August 2025 Relative Humidity Forecast for Livestock

- **Poultry and pigs:** These species have low tolerance for hot and humid conditions, making them highly vulnerable to stress, reduced feed intake, and increased mortality.
- **Aquaculture systems:** Warm, humid conditions lower dissolved oxygen levels in water, which can threaten fish health and growth.

- Micro-livestock (e.g., snails): While they may benefit from higher humidity, adequate ventilation and shading are still required to prevent overheating.
- Small Ruminants: Persistently high humidity, coupled with high rainfall expected, may encourage parasite infestations and vector-borne diseases.

5.5 Weather Advisory for Livestock Farmers in August 2025

This advisory provides species-specific guidance to livestock farmers across Nigeria for August 2025, based on weather forecasts and Livestock Comfortability Index (LCI) analysis.

Grazing!

- Rotate grazing paddocks to prevent overgrazing and soil compaction;
- Mix lush green grass with dry fodder or crop residues (e.g., maize stover, sorghum stalks) to balance fibre.
- Monitor animal health closely, especially for parasites and waterborne diseases

5.5.1 General Advisory for All Livestock Farmers

- Provide constant access to clean drinking water for farm animals (preferably fortified with electrolytes or multivitamins).
- Ensure adequate ventilation in housing structures.
- Monitor animals for signs of lethargy and quarantine where necessary.



Cattle (Beef & Dairy)

- Rotate grazing to prevent overuse and soil compaction. Avoid grazing in soggy ground. Use paddocks that are not waterlogged,
- Provide clean, safe drinking water. Regularly clean troughs. Avoid letting cattle drink from stagnant puddles.
- Keep deworming schedules; use appropriate tick control (dipping, spraying). Ensure vaccines are up to date.
- Monitor for early signs of disease and consult a veterinary Doctor
- Inspect hooves regularly for rot or injury.
- Calves, lactating cows, and weak animals are more susceptible to cold, damp, and disease. Ensure extra protection and good nutrition
- Promote pasture preservation by making hay or silage from crop residues and excess grasses before the dry season.
- Monitor animal health closely, especially for parasites and waterborne diseases



Poultry & Pigs

- Regularly change or dry litter to avoid ammonia build-up.
- Provide shade and fresh water to reduce heat stress, especially for pregnant and lactating animals.
- Strengthen deworming and vaccination
- Use improved housing/ventilation for poultry to maintain egg and meat production.



Aquaculture (Cat Fish, Tilapia, etc.)

- Install inlet screens to filter debris and contaminants
- Feed during warmer parts of the day when activity is highest or adjust feeding rates based on fish behaviour.
- Maintain biosecurity (disinfect equipment, limit visitors).
- Store feed in dry, waterproof areas to prevent mould (aflatoxin risk)
- Feed during cooler times of day: early morning and late evening.



Micro-livestock (Snails, Rabbits)

- Practice strict hygiene, regular disinfection, and biosecurity.
- August mild conditions encourage breeding; ensure adequate nutrition for mothers and young
- Mix green forage with dry matter (grains, pellets).



Small Ruminants (Sheep and Goats)

- Provide dry resting areas, trim hooves regularly, and implement deworming and tick control programs.
- Avoid continuous grazing on waterlogged fields.
- Provide mineral licks (salt, calcium, phosphorus) since rains leach nutrients from soils.
- Vaccinate against goat plague, especially in the north, before the rains peak.



Conflict Risk Advisory (Pastoral Migration)

- Monitor and engage with pastoralists
- Support the implementation of grazing corridors, water points, and pasture banks where possible.
- Collaborate with local authorities and security agencies to mitigate farmer–herder conflict risk during seasonal migration.
- Encourage open, respectful, and honest dialogue.

August 2025

Summary

This edition of the Livestock Weather Bulletin provides a clear and actionable overview of rainfall forecasts, temperature trends, and drought risks to support livestock farming and management across Nigeria in August 2025. It also offers practical guidance on mitigating potential adverse effects, such as heat stress or water scarcity, on livestock during the month. The bulletin is specifically tailored to livestock farmers and managers, ensuring that each section delivers information relevant to their decision-making and operational needs.

- In August 2025, substantial rainfall was recorded across the northern states, generally ranging from 196mm in Nguru (Yobe State) to 639.16mm in Maiduguri (Borno State), although Taraba State received slightly less. In contrast, the southern states recorded low to moderate rainfall, with intermittent dry spells particularly evident in Oyo, Osun, Enugu, and Anambra. Some central states, including Kwara, also recorded below-normal rainfall during the period.
- Maximum temperatures in August 2025 ranged from 24.6°C to 32.9°C, with the highest value recorded in Nguru, Yobe State (32.9°C), and the lowest in Jos, Plateau State (24.6°C).
- In August, LCI analysis indicated mild heat stress for animals across most states in Nigeria, suggesting that livestock were exposed to slightly elevated temperatures that could cause discomfort but were generally within tolerable limits.

- For September 2025, forecasts anticipate moderate to heavy rainfall across the country.
- Maximum daytime temperatures are forecasted to range from 29°C to 33°C in the northern and central states, and from 24°C to 32°C in the southern states.
- For more information, visit NiMet at www.nimet.gov.ng, or download the NiMet Weather App (available on Google Play and the Apple App Store).

1.0 Rainfall Pattern Across Nigeria in August 2025

1.1 Rainfall Amount

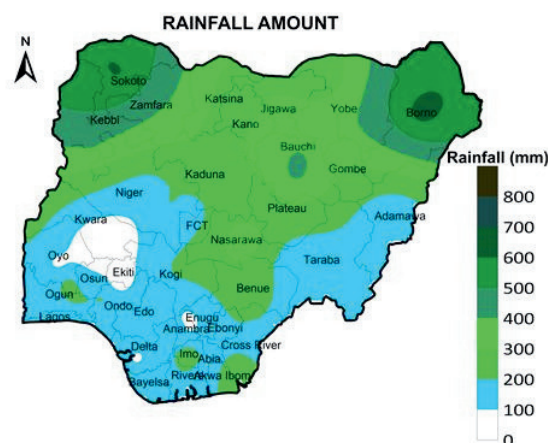


Figure 1: Rainfall Amount across Nigeria in August 2025.

Rainfall across Nigeria in August 2025 was generally heavy, particularly in the northern states, where the rainfall totals ranged from 196 mm in Nguru (Yobe State) to 639.16 mm in Maiduguri (Borno State), indicating a strong and active rainy season. In the central states, rainfall was moderate to heavy, varying from as low as 21.7 mm in parts of Kwara State to as high as 377.0 mm in Lafia (Nasarawa State), reflecting

pronounced spatial variability in precipitation distribution. This uneven moisture availability is expected to result in variable pasture regeneration across regions, with areas receiving higher rainfall experiencing improved forage growth, while areas with lower rainfall may face delayed or limited pasture recovery.

2.0 Soil Moisture Conditions Across Nigeria in August 2025

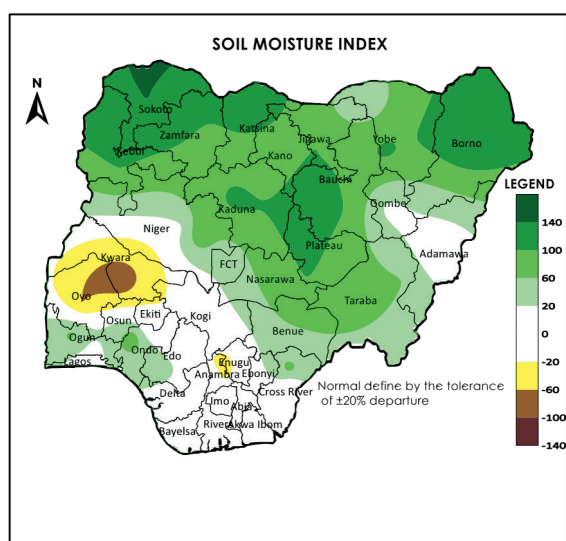


Figure 2: Soil Moisture Index (SMI) across Nigeria in August 2025.

Figure 2 shows the distribution of soil moisture across Nigeria in August 2025. Results of the analysis indicates widespread above-normal soil moisture across most northern, central, and eastern states, reflecting the sustained influence of moist south-westerly winds across the country during the month of August. In contrast, pockets of below-normal soil moisture were observed in parts of Kwara, Oyo, Osun, Enugu, and Anambra states, suggesting localized rainfall deficits. Overall, these conditions support strong pasture regeneration in the northern states during August, while the southern states continue to maintain generally

good pasture conditions, despite isolated moisture deficits, due to the dry spells.

3.0 Temperature Distribution Across Nigeria in August 2025

3.1 Maximum (Daytime) Temperature Distribution

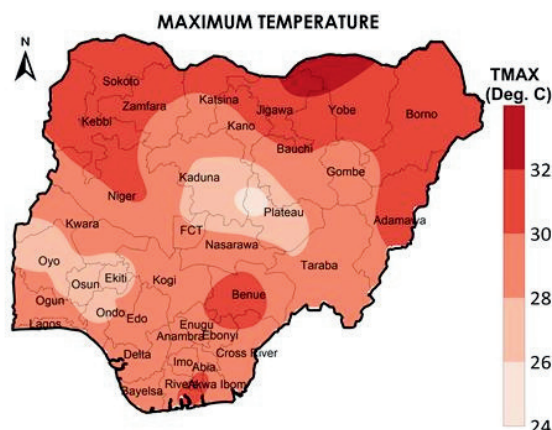


Figure 3: Maximum Temperature Distribution Across Nigeria in August 2025.

As illustrated in Figure 3, daytime temperatures declined slightly in August compared to the preceding month. This reflects the seasonal transition associated with peak rainfall activity. Maximum temperatures ranged from 24.6 °C to 32.9 °C, with the highest value (32.9 °C) recorded in Nguru, Yobe State, and the lowest (24.6 °C) observed in Jos, Plateau State. In general, higher daytime temperatures were concentrated in the northern parts of the country. In comparison, comparatively lower temperatures prevailed across the central and southern states, where maximum temperatures mostly ranged between 26.6 °C and 30.6 °C.

3.2: Minimum Temperature Distribution Across Nigeria in August 2025

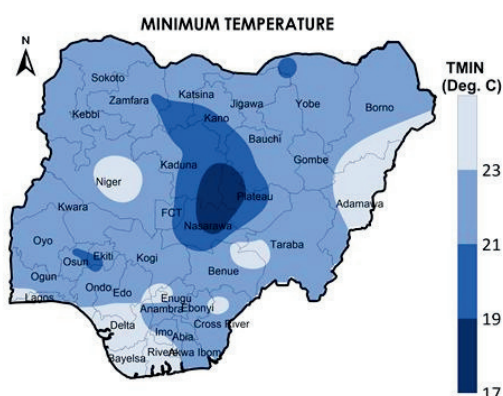


Figure 4: Minimum Temperature Across Nigeria in August 2025.

In August 2025, minimum (nighttime) temperatures across Nigeria ranged from 17.0°C in Jos (Plateau State) to 24.3°C in Lokoja (Kogi State), about 2°C above the average. Cooler nights in Jos (Plateau State) may increase the risk of respiratory infections in young livestock, while persistently warm nights in some areas like Yola (Adamawa State) can limit recovery from daytime heat stress, affecting growth, fertility, and water requirements.

3.3 Livestock Comfortability Index (LCI) Across Nigeria in August 2025.

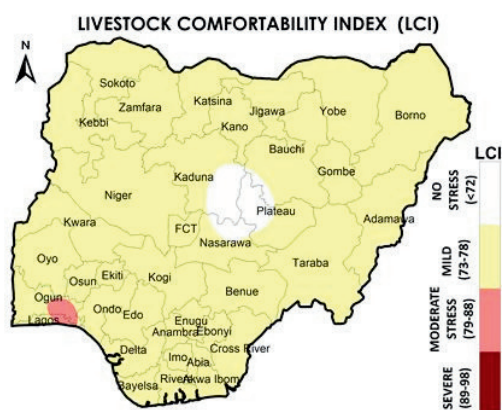


Figure 5: Livestock Comfortability Index for November 2025.

Figure 5 the Livestock Comfortability Index (LCI) across Nigeria in August 2025. The LCI serves as a relative indicator of livestock comfort under extreme temperature conditions and is useful for assessing potential impacts on animal performance. August LCI analysis indicated mild heat stress for animals across most states in Nigeria, suggesting that livestock were exposed to slightly elevated temperatures that could cause discomfort but were generally within tolerable limits.

4.0 Normalized Difference Vegetation Index (NDVI)

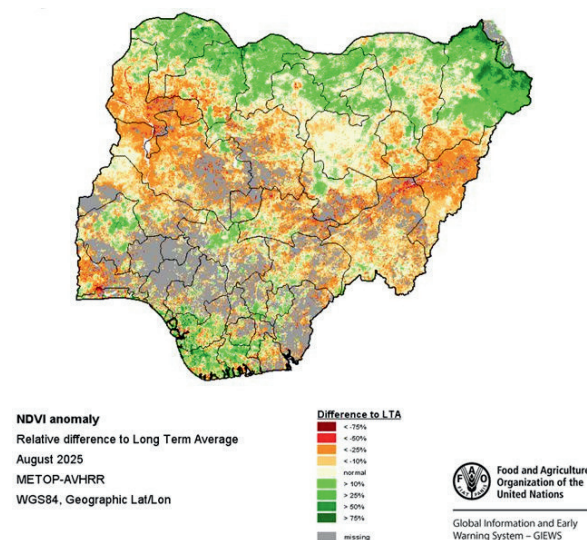


Figure 6: Normalized Difference Vegetation Index In August 2025

The NDVI for every part of Nigeria in August 2025 is presented in Figure 6. In August 2025, NDVI patterns across Nigeria showed marked spatial variability. The NDVI across the northernmost fringe of Nigeria in August 2025 was above-average, indicating early pasture recovery, while much of the central states had near-normal to slightly below-average vegetation. There was abundant vegetation in the southwest and southeast, as well as some coastal areas whereas most of the inland areas had

localized vegetation deficits. Overall, the southern states of the country maintained better forage conditions during the period due to higher rainfall.

5.0 Weather/Agricultural Outlook for September 2025

5.1 Weather Forecast September 2025

In September 2025, the Inter-Tropical Discontinuity (ITD) is expected to shift further northward, reaching an average position of about 21.0°N. This northward displacement typically enhances moisture influx and rainfall over the regions under the influence of the moist southwesterly winds. Consequently, increased rainfall activity is anticipated across much of Nigeria, particularly in the northern and central zones, which is likely to support crop development and pasture regeneration during this period.

5.1.1 Rainfall Forecast for September 2025

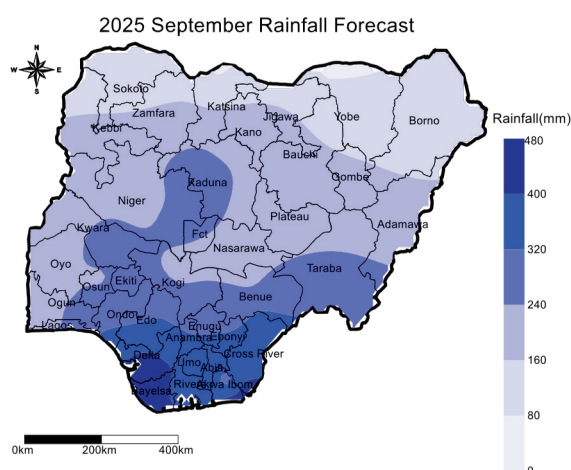


Figure 7: Rainfall Forecast for December 2025

The rainfall forecast across Nigeria in September 2025 is presented in Figure 7

• Southern States

- The forecast predicts between 240mm and 480mm of rainfall in most parts of the southern states.

• Central States

- Predicted rainfall totals for September 2025 range between 160 and 400 mm.

• Northern States

- The predicted rainfall for the month range from 100 to 400mm.

5.1.2 Implications of the Rainfall Forecast for Livestock

• Southern States (Coastal & Inland):

- Increased rainfall will enhance pasture growth and improve forage availability
- Improved moisture conditions may help reduce heat stress in livestock.
- Heavy or prolonged rainfall can cause flooding of ponds, affecting aquaculture activities.

• In the Central and Northern States:

- Forecasted rainfall is generally favorable for pasture regeneration and water-source replenishment.
- Should support moderate grazing; however, uneven rainfall distribution may leave some areas drier, limiting forage availability

5.2 Temperature Forecast for September 2025

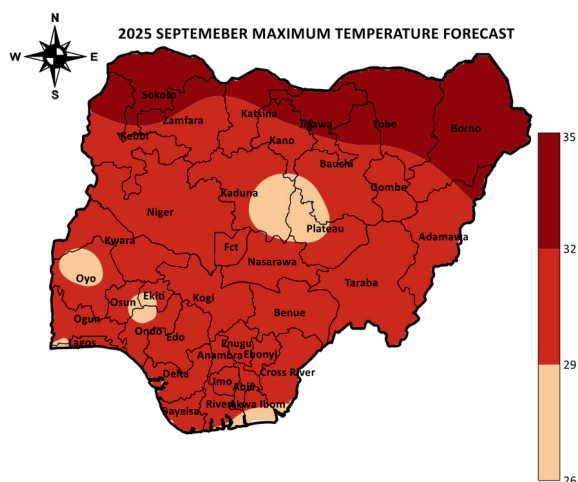


Figure 8: Maximum Temperature Forecast for September 2025

The forecast of maximum (daytime) temperatures across Nigeria for September 2025 is presented in Figure 8. Maximum daytime temperatures are forecast to be highest in the northern states, ranging from 29 to 32 °C across most of Borno, Yobe, Jigawa, Sokoto, Kebbi, Zamfara, Katsina, Kano, Bauchi, Gombe, and parts of Niger and Adamawa.

In the central and southern states, daytime temperatures are expected to range between 26 and 32 °C.

5.2.1 Implications of the Forecast Daytime Temperatures for Livestock

- **In the Northern and Central States - High Temperatures (26°C to 35°C)**
 - Temperatures are mostly favourable; however, conditions may still induce mild to moderate heat stress for livestock.
 - Increased vulnerability to livestock diseases associated with persistently damp conditions.

- **In the Southern States - Lower Temperatures (30°C to 32°C)**

- Supports better feed intake, fertility, and productivity compared to hotter zones.
- Persistently damp ground conditions may increase the risk of parasitic infestations in grazing livestock.

5.3 Minimum Temperature Forecast for September 2025

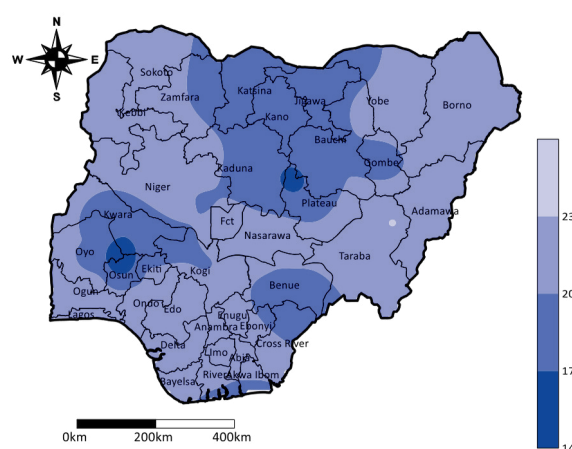


Figure 9: Minimum Temperature Forecast for September 2025

The forecast of minimum (nighttime) temperatures across Nigeria for September 2025 is presented in Figure 9. Minimum temperatures are expected to range from 15 to 20 °C in parts of Plateau State. In Sokoto, Jigawa, Yobe, Kebbi, Zamfara, Katsina, Kano, Bauchi, and parts of Borno, Gombe, and Adamawa states, nighttime temperatures are forecast to remain between 17 and 25 °C. The rest of the country is expected to experience minimum temperatures of 20 to 25 °C.

5.3.1 Implications of the Forecast Nighttime Temperatures for Livestock

- **Plateau State (15 to 20°C):**
 - Cool nights may reduce heat stress, supporting better feed intake and growth in livestock
- **In the Northern States:**
 - Moderate nighttime temperatures may help livestock recover from daytime heat, although stress may persist in hotter areas.
- **The Rest of the country (20 to 25°C):**
 - Warmer nights could slightly increase the chances of heat stress in sensitive animals, particularly poultry and young stock.

5.4 Relative Humidity Forecast for September 2025

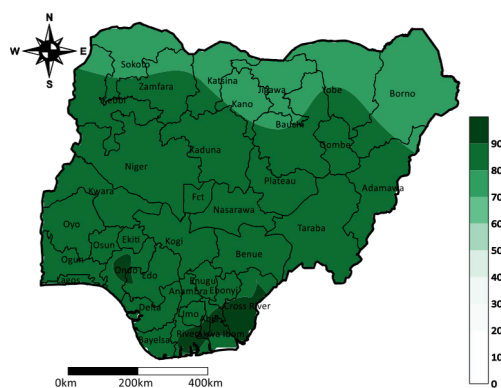


Figure 10: Relative Humidity Forecast for September 2025

The forecast for relative humidity across Nigeria for September 2025 is presented in Figure 10. During the period, humidity is expected to remain high in most parts of Nigeria, particularly in the southern and central states. When combined with warm daytime and nighttime temperatures typical of this period, these conditions increase the risk of heat stress in livestock. Dairy cows, poultry, and pigs

are especially vulnerable, as the combination of heat and high humidity limits their ability to regulate body temperature, potentially reducing productivity, increasing water demand, and raising mortality risk if proper management measures are not taken.

5.5 Weather Advisory for Livestock Farmers in September 2025

This advisory provides livestock farmers across Nigeria with species-specific guidance for September 2025, based on the September 2025 weather forecast and Livestock Comfortability Index (LCI) analysis.

Grazing!

- Northern and Central states: Farmers should expect significant improvements in forage and water availability, supporting livestock grazing.
- Southern states: Forage will be readily available, but high humidity will increase the risks of coccidiosis, ticks, trypanosomiasis, and helminths; therefore, regular veterinary checks are advised.

5.5.1 General Advisory for All Livestock Farmers

- Keep young animals (calves, lambs, kids) warm with bedding and dry housing.
- Limit exposure to cold: avoid night grazing and long-distance movements during cold periods.
- Ensure animals have constant access to clean drinking water; consider electrolytes or multivitamins.
- Provide adequate ventilation in housing and monitor for flooding or waterlogged grazing areas.

- Watch animals for signs of cold stress, such as weight loss or reduced productivity.



Cattle (Beef & Dairy)

- Inspect hooves frequently to catch early signs of foot rot
- Provide simple shelters or fences to shield animals from cold wind and rain.
- Give more grains, concentrates, and enough roughage to help animals stay warm at night.



Poultry & Pigs

- Reduce stocking density to improve airflow.
- Implement strict biosecurity and vaccination programs.
- Ensure waterers are shaded and cleaned frequently to encourage water intake.
- Use improved housing/ventilation for poultry to maintain egg and meat production.
- Improve ventilation in pig pens to reduce humidity build-up.
- Provide wallows or sprinklers (where appropriate) to reduce heat stress.
- Improve sanitation and regular health checks.
- Ensure proper drainage around housing to prevent flooding and dampness.
- Maintain dry litter and flooring by frequent replacement and cleaning.



Aquaculture (Cat Fish, Tilapia, etc.)

- Increase aeration in ponds and monitor water quality, especially oxygen and ammonia levels.
- Reduce stocking densities to minimize oxygen demand
- Regularly monitor water parameters, including temperature, pH, and oxygen, especially during heat spikes.
- Change water regularly, especially in concrete or plastic tanks, to prevent heat buildup.
- Feed fish during cooler periods of the day, such as early morning and late evening.



Micro-livestock (Snails, Rabbits)

- Keep animals in cool, shaded, and well-ventilated enclosures.
- For rabbits/grasscutters, feed during cooler hours and ensure dry, clean bedding.
- For snails, ensure constant humidity by lightly spraying the housing with water in the evenings.



Conflict Risk Advisory (Pastoral Migration)

- Support the implementation of grazing corridors, water points, and pasture banks where possible.
- Collaborate with local authorities and security agencies to mitigate farmer-herder conflict risk during seasonal migration.

September 2025

Summary

This edition of the Livestock Weather Bulletin provides a clear and actionable overview of rainfall forecasts, temperature trends, and drought risk to support livestock farming and management across Nigeria in September 2025. It also offers practical guidance on mitigating potential adverse effects, such as heat stress or water scarcity, on livestock during the month. The bulletin is specifically tailored to support livestock farmers and managers, ensuring each section delivers information relevant to their decision-making and operational needs.

- In September 2025, rainfall was significantly higher in the south-western states including Lagos, Ogun, and Oyo, as well as other southern states such as Akwa Ibom and Rivers (128.1 to 690.4 mm). In contrast, states in the north (Yobe, Sokoto, and Kano) and central states like Niger, Plateau, and Kogi experienced lower rainfall amounts (50.9 to 401 mm). Rainfall is expected to be heavy in the southern states (240 to 400 mm), while moderate to heavy rainfall (40 to 160 mm) is forecast for northern and central regions. These conditions, along with rising temperatures, may contribute to moderate to severe heat stress affecting livestock nationwide.
- Daytime temperatures ranged from 26.7 to 34.4 °C across the northern and central states, and from 25.9 to 30.2 °C in the southern states. Maximum daytime temperatures are expected to reach 36 to 39 °C in the northern states (Borno, Yobe, Sokoto, Kano, Katsina, Zamfara), 30 to 33 °C in central states (Niger, Plateau, Benue, Kogi), and 27–30 °C in southern states (Lagos, Ogun, Oyo, Akwa Ibom, Rivers).
- Analysis of the Livestock Comfortability Index (LCI) indicates the occurrence of mild to moderate heat stress conditions across the country, with likely negative effects on feed intake, well-being, reproduction, and productivity of livestock. Farmers in northern states should monitor livestock closely for signs of heat stress and adjust feeding schedules or provide additional shade during periods of high temperature. Throughout Nigeria, pasture and water resources are expected to be sufficient to sustain livestock during October; however, heat stress may be moderate to severe, requiring proactive care and management.
- Pasture and water resources are expected to be sufficient to sustain livestock in October 2025. Heat stress may be moderate to severe across the country during the month.
- Contact NiMet for further Information on www.nimet.gov.ng, or download the NiMet Weather App (available on Google Play and the Apple App Store).

1.0 Rainfall Pattern Across Nigeria in September 2025

1.1 Rainfall Amount

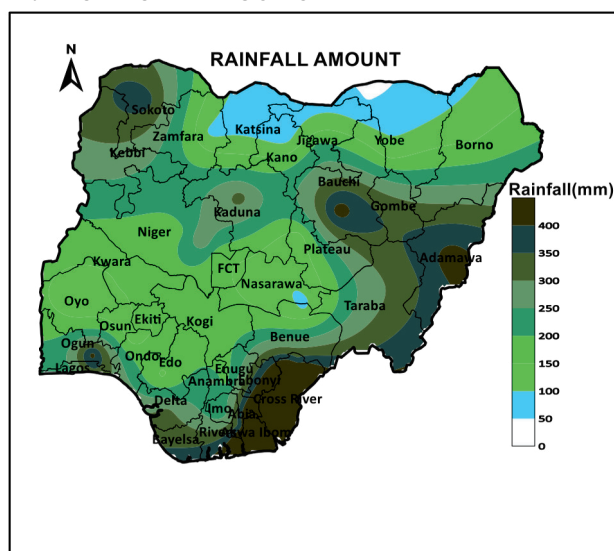


Figure 1: Rainfall Amount across Nigeria in September 2025.

Analysis of the rainfall data across Nigeria in September 2025 reveals a significant improvement in precipitation, particularly in the south-western states, which previously experienced dry spells. The southern states recorded rainfall amounts ranging from 128.1 to 690.4 mm, while the northern and central states received between 50.9 and 401 mm. Uyo (Akwa Ibom State) recorded the highest rainfall total (690.4 mm), whereas Nguru (Yobe State) recorded the lowest.

The increased rainfall is expected to improve pasture availability across Nigeria during the period. However, persistently wet conditions may result in higher the risk of livestock diseases due to high humidity and waterlogged environments.

2.0 Soil Moisture Conditions Across Nigeria in September 2025

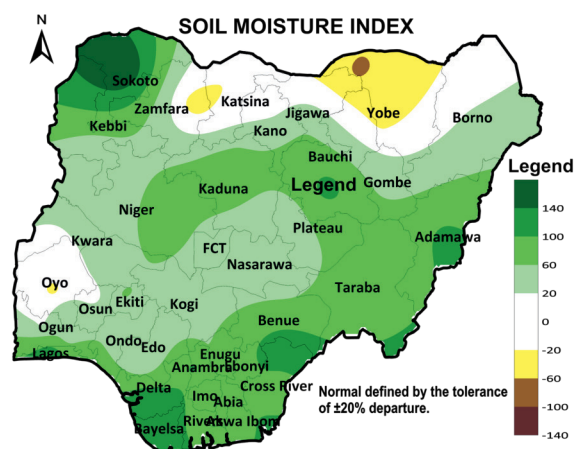


Figure 2: Soil Moisture Index (SMI) across Nigeria in September 2025.

Figure 2 shows the distribution of soil moisture conditions across Nigeria in September 2025. Above-normal soil moisture was observed across most parts of the country. However, parts of Zamfara, Katsina, Jigawa, and Yobe states recorded below-normal soil moisture.

Implications for Pasture

Despite localized moisture deficits in some areas, pasture availability and surface water resources are not expected to be significantly affected. Improved grazing conditions are likely to be seen in the south-western states following recovery from earlier dry spells.

3.0 Temperature Distribution Across Nigeria in September 2025

3.1 Maximum (Daytime) Temperature Distribution

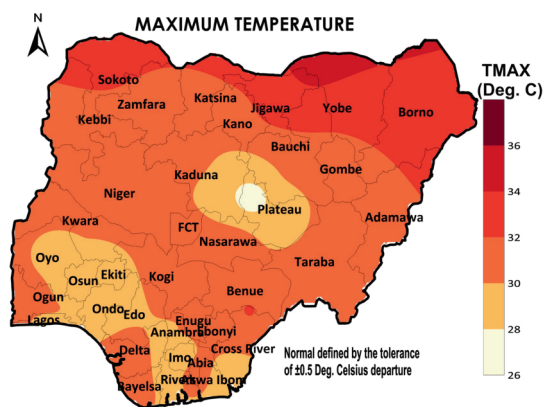


Figure 3: Maximum Temperature Distribution Across Nigeria in September 2025.

Northern States (Sokoto, Kebbi, Zamfara, Katsina, Kano, Jigawa, Yobe, and Borno):

In September 2025, maximum temperatures across the northern states ranged between 30.0°C and 34.6°C, with relatively cooler and more humid conditions compared to August.

North-Central States (Niger, Kwara, Kogi, FCT, Benue, Plateau, Nasarawa, Taraba):

Most areas recorded daytime temperatures ranging from 26.7°C to 31.3°C; Plateau State was relatively cooler (26.7°C). The temperatures in this area are lower compared to other parts of northern Nigeria.

Southern States (Oyo, Ogun, Ondo, Ekiti, Osun, Edo, Rivers, Cross River, Akwa Ibom, Bayelsa, Delta, Lagos, Anambra, Enugu, Imo, Abia, Ebonyi):

Temperatures across the region ranged between 26.7°C and 32.3°C. These were generally lower than those recorded in the northern and central states due to persistent cloud cover and coastal influences. Eket (Akwa Ibom State)

recorded the lowest temperature in the region (25.8°C). These relatively cooler temperatures were favourable for livestock comfort and crop physiological processes.

3.2: Minimum Temperature Distribution Across Nigeria in September 2025.

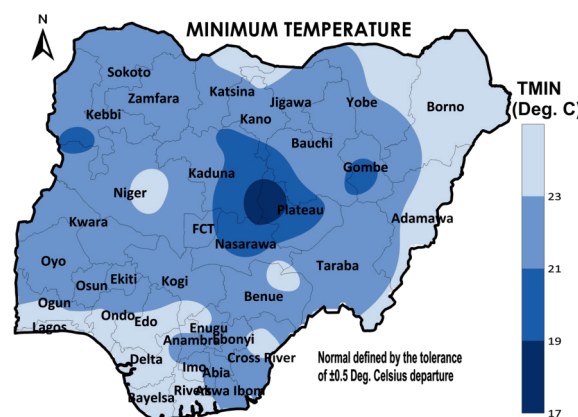


Figure 4: Minimum Temperature Across Nigeria in September 2025.

Figure 4 shows the minimum (nighttime) temperatures recorded across Nigeria in September 2025, ranging from 17.2°C in Jos (Plateau State) to 24.0°C in Yola (Adamawa State) and Bida (Niger State). These values are approximately 2°C higher than the historical average for other months. When combined with relatively high daytime temperatures, the reduced nighttime cooling limits thermal relief for animals, increasing the likelihood of sustained heat stress and reduced comfort, particularly for cattle and small ruminants.

3.3 Livestock Comfortability Index (LCI) Across Nigeria in September 2025.

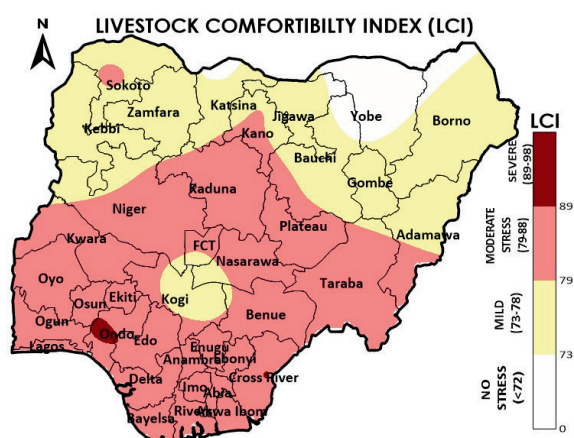


Figure 5: Livestock Comfortability Index in September 2025.

Figure 5 illustrates the Livestock Comfortability Index (LCI) across Nigeria in September 2025. The LCI serves as a relative indicator of livestock comfort under extreme temperature conditions and is useful for assessing potential impacts on animal performance.

Analysis of the LCI shows that most parts of the northern states experienced mild heat stress, while the central and southern states experienced moderate to severe heat stress.

4.0 Normalized Difference Vegetation Index (NDVI)

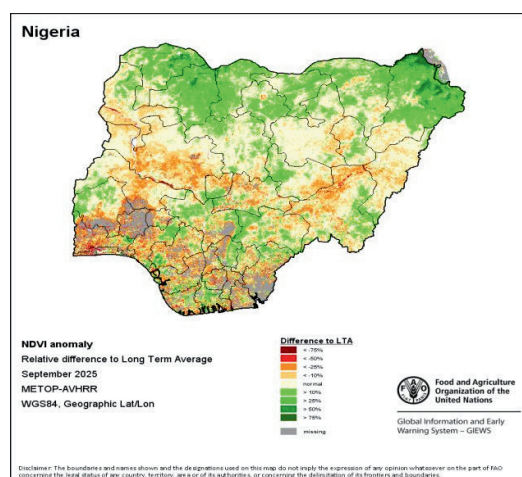


Figure 6: Normalized Difference Vegetation Index

The NDVI anomaly across Nigeria in September 2025 is presented in Figure 6. Above-normal vegetation which will improve pasture availability for livestock, is observed in most of northern Nigeria. Similarly, the southern states had above-normal vegetation, providing abundant and high-quality pasture for livestock during the month. On the other hand, the vegetation in the central states was mixed, with uneven pasture growth and localized forage shortages.

5.0 Weather/Agricultural Outlook for October 2025

5.1 Weather Forecast for October 2025

In October 2025, the Intertropical Discontinuity (ITD) is expected to attain its northernmost position of 23.0°N. This will allow continuous influx of moisture into the country, thereby, increasing the intensity of rainfall in northern Nigeria.

5.1.1 Rainfall Forecast for October 2025

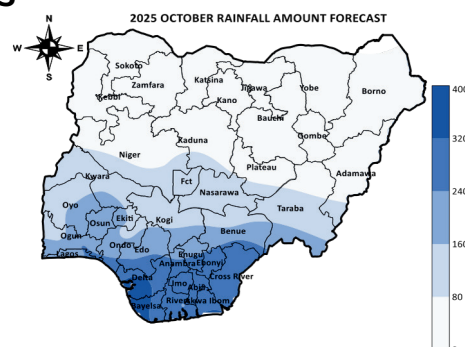


Figure 7: Rainfall Forecast for January 2026

Figure 7 shows the rainfall forecast for Nigeria for October 2025. The following are the highlights:

High Rainfall Amounts in the Southern States: The forecast predicts 240mm to 400mm of rainfall in most parts of the southern states in October 2025.

Moderate to High Rainfall in the Central States: The forecast predicts 80 to 240 mm of rainfall in October.

Moderate to Heavy Rainfall in the Northern States: Adamawa, Bauchi, Borno, Gombe, Yobe, Jigawa, Sokoto, Kebbi, and Katsina are forecasted to receive 40 to 160mm for October 2025.

5.1.2 Implications of the October 2025 Rainfall Forecast for Livestock:

In the Southern States (Coastal & Inland):

- Improved pasture growth, providing more abundant forage and helping to reduce heat stress in livestock.
- Heavy or prolonged rains can also lead to flooding of ponds (affecting aquaculture) and waterlogged grazing areas.
- Higher risk of diseases such as foot rot, spread of parasitic infections, particularly gastrointestinal worms and liver flukes, which can cause weight loss, diarrhea, and reduced productivity in livestock.

In the Central States:

- The forecasted rainfall in the central states is generally favourable for pasture growth and the replenishment of water sources, supporting grazing.

In the Northern States:

- Improved pasture growth, providing more abundant forage and helping to reduce heat stress in livestock.
- Cold stress may affect young animals, particularly broilers.

5.2 Maximum Temperature Forecast for October 2026

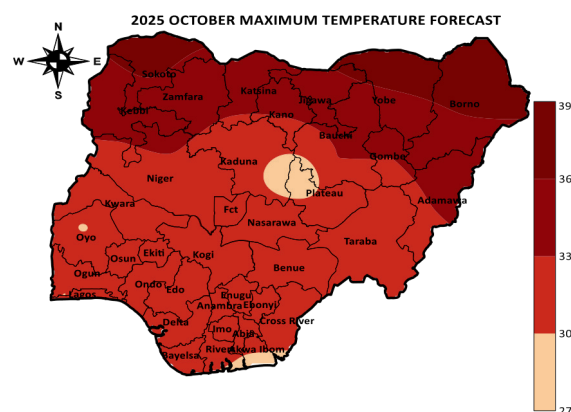


Figure 8: Maximum Temperature Forecast for October 2025

The forecast of maximum (daytime) temperatures across Nigeria for October 2025 is presented in Figure 8. In October 2025, maximum (daytime) temperatures of 36 to 39 °C are anticipated across most parts of Borno, Yobe, Jigawa, Sokoto, Kebbi, Zamfara, Katsina, Kano, Bauchi, Gombe, and Adamawa states. The central states are expected to record 27 to 33 °C, while the southern states are likely to experience 27 to 30 °C.

In the Northern States - High Temperatures (36°C to 39°C)

- May expose livestock to moderate to severe heat stress, reducing feed intake, weight gain, fertility, and milk yield

In the Central States - Moderate Temperatures (27°C to 33°C):

- Animals are likely to face mild to moderate heat stress.

In the Southern States - Lower Temperatures (27°C to 30°C)

- May expose livestock to moderate heat stress, which may impact on feed intake, weight gain, fertility, milk yield, poor egg quality, and, in extreme cases, mortality.

5.3: Minimum Temperature Forecast for October 2025

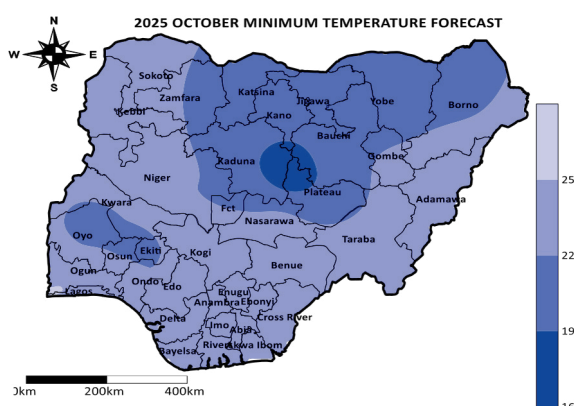


Figure 9: Minimum Temperature Forecast for October 2025

The forecast of minimum (nighttime) temperatures across Nigeria for September 2025 is presented in Figure 9.

Minimum temperatures of 16 to 22 °C are expected over parts of Plateau and Kaduna States. Across Borno, Yobe, Bauchi, Jigawa, Katsina, Kano, Kaduna, Gombe, Nasarawa, Niger, Zamfara, Kwara, Ekiti, Oyo, Osun, and the FCT, nighttime temperatures will also range between 16–22 °C, offering brief relief from intense daytime heat. In the remaining parts of the country, minimum temperatures are projected to be 22 to 25 °C, providing moderate nighttime comfort.

5.3.1 Implications of the Forecast Nighttime Temperatures for Livestock

In the Northern States:

- Cold nighttime temperatures may affect young animals and poultry chicks, increasing the risk of hypothermia.

In the Southern States:

- Nights are relatively mild; no serious cold stress expected.
- High day-night temperature variation may affect animal metabolism and feed utilization.

5.4 Relative Humidity Forecast for October 2025

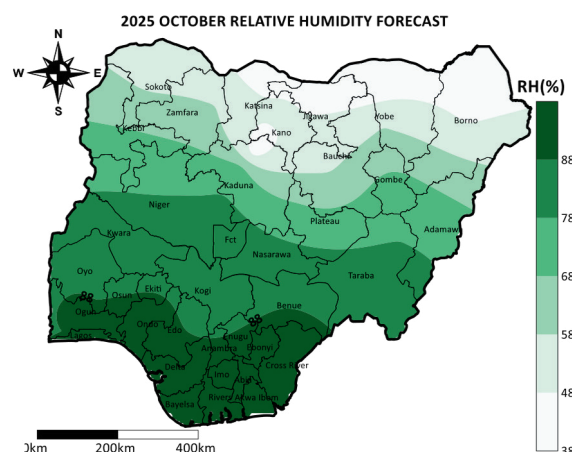


Figure 9: Relative Humidity Forecast for October 2025

The forecast of relative humidity for October 2025 is presented in Figure 10. During the month, relative humidity is expected to increase across most parts of the country, with the highest values anticipated in the southern states and parts of the central region.

When combined with the rising temperatures typical of this period, these conditions are likely to significantly increase heat stress risks for livestock.

5.4.1 Implications of October 2025 Relative Humidity Forecast for Livestock

High humidity combined with elevated temperatures is expected to heighten heat stress risks. The key implications include:

- **Poultry and pigs:** They have low tolerance for hot and humid conditions, making them highly susceptible to stress, reduced feed intake, and increased mortality.
- **Aquaculture systems:** Warm, humid conditions lower dissolved oxygen levels in water, which could threaten fish health and growth.

- **Micro-livestock (e.g., snails):** While they may benefit from the expected higher humidity, adequate ventilation and shading are still required to prevent overheating.
- **Ruminants:** Persistently high humidity may encourage parasite infestations and vector-borne diseases.

5.5 Weather Advisory for Livestock Farmers in October 2025

This advisory provides species-specific guidance to livestock farmers across Nigeria for September 2025, based on weather forecasts and Livestock Comfortability Index (LCI) analysis.

Grazing!

- Northern states: Conserve hay from beans, groundnut, and sorghum residues now to ensure adequate fodder during the peak dry season.
- Central states: Pasture growth is declining; begin controlled grazing and prioritize hay conservation and storage to bridge the approaching dry season.
- Southern states: Forage remains available, but high humidity elevates disease risks; strengthen routine veterinary checks and parasite control.

5.5.1 General Advisory for All Livestock Farmers

- Provide constant access to clean, cool drinking water for farm animals (preferably fortified with electrolytes or multivitamins).
- Ensure adequate ventilation in housing structures.
- Monitor animals for signs of heat stress: excessive panting, reduced appetite, or lethargy.

- Supplement feed with crop residues or concentrates.
- Feed during cooler times of day: early morning and late evening.



Cattle (Beef & Dairy)

- Reduce stocking density in pens or kraals to minimize heat buildup.
- Use shade structures or plant live fences (e.g., neem, moringa) around open pens.
- Provide sprinkler systems or shallow wallowing pools for cooling.
- Encourage rotational grazing.
- Promote pasture preservation by making hay or silage from crop residues and excess grasses before the peak dry season.



Poultry & Pigs

- Feeding: Restrict feeding to early morning (before 9 a.m.) and late evening (after 5 p.m.).
- Provide shade and fresh water to reduce heat stress, especially for pregnant and lactating animals.
- Strengthen deworming and vaccination programs in the south, where wet conditions favor parasite buildup.
- Ensure waterers are shaded and cleaned frequently to encourage water intake.



Aquaculture (Cat Fish, Tilapia, etc.)

- Increase aeration in ponds and monitor water quality (especially oxygen and ammonia).
- Reduce stocking densities to minimize oxygen demand
- Monitor water quality (temperature, pH, oxygen) regularly, especially during heat spikes.
- Change water regularly, especially in concrete or plastic tanks, to prevent heat buildup.



Micro-livestock (Snails, Rabbits)

- Keep animals in cool, shaded, and well-ventilated enclosures.
- For rabbits/grasscutters, feed during cooler hours and ensure dry, clean bedding.
- For snails, ensure constant humidity by lightly spraying the housing with water in the evenings.
- Plan reproduction cycles for less stressful weather periods; delay breeding if temperatures exceed stress thresholds.



Conflict Risk Advisory (Pastoral Migration)

- Monitor and engage with pastoralist communities as migration to southern states increases in search of pasture.
- Support the implementation of grazing corridors, water points, and pasture banks where possible.
- Collaborate with local authorities and security agencies to mitigate farmer–herder conflict risk during seasonal migration.



Need More Info?

- For up-to-date weather information and livestock advisories:
- Visit: www.nimet.gov.ng
- Download: NiMet Weather App on Android or iOS
- Contact: NiMet offices in your state or the FCT
- Maintaining contact with veterinarians

Remember!

A forecast today saves your herds tomorrow. Be climate smart.