

Livestock Weather Bulletin

April- June 2025

Maiden Edition

A Publication of Nigerian Meteorological Agency

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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.....

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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*

April 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 April 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 April 2025, the coastal states and parts of the Southwest received substantial rainfall, ranging from 200 to 416 mm, which supported the growth of lush pasture in the southern states. In contrast, the northern and central states experienced slight to moderate rainfall. Notably, Maiduguri in Borno state recorded exceptionally high daytime temperatures, reaching up to 41.7°C. These precise weather data are provided to help farmers and other decision-makers in the livestock sector anticipate local conditions and plan accordingly.
- The Livestock Comfortability Index (LCI) is a variable that combines temperature and relative humidity, to assess how comfortable livestock are at any location. A lower LCI means animals are more comfortable, while higher values indicate stress. In April, LCI analysis showed moderate to severe stress for animals nationwide, which could potentially reduce feed intake, affect well-being, and lower reproduction and productivity of livestock. Understanding LCI helps farmers take timely action to protect their herds.
- For May 2025, forecasts anticipate heavier rainfall in the south (200 to 400 mm), moderate to heavy rainfall in central areas (80 to 200 mm), and little to no rainfall further north.
- Maximum daytime temperatures are expected to range from 40 °C to 45 °C in the northern states, 30 °C to 40 °C in central states, and 30 °C to 35 °C in the south. These region-specific updates will continue to guide management decisions and support livestock health.
- High temperatures and dry conditions threaten herds nationwide, making supplemental feed and water essential. Rotational grazing is required to manage regenerating pastures. In the southern states, measures to mitigate humidity-related risks like parasites and waterlogging are required.
- 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 April 2025

1.1 Rainfall Amount

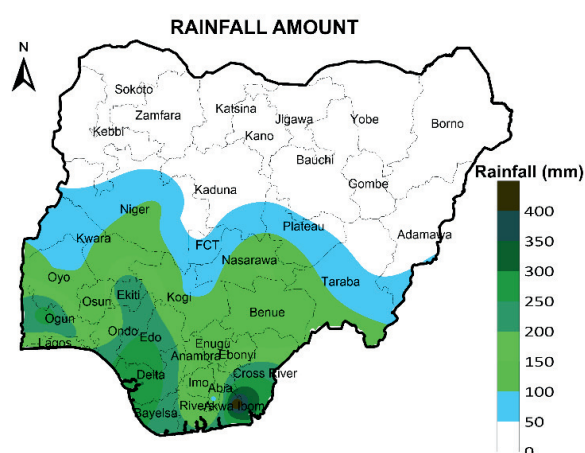


Figure 1: Rainfall Amount across Nigeria in April 2025.

Rainfall amounts across Nigeria in April 2025 are shown in Figure 1. The highest totals were recorded in the coastal states and parts of the Southwest (200 to 416 mm). Other areas of the southern region received 90 to 180 mm, while the central states recorded 30 to 160 mm. In contrast, most of the northern states received little or no rainfall; for example, in Yobe state, only 10 mm of rain was recorded, which may delay pasture growth and require herders to supplement animal feed. A few locations in Kaduna, Gombe, and Yobe states recorded modest rainfall amounts ranging between 5 and 20 mm.

The rains were heavier in the south, supporting good pasture growth and improved water availability for grazing animals. However, high soil moisture and humidity may have caused waterlogging and encouraged the spread of ectoparasites—parasites that live on the skin of animals, such as ticks and certain types of worms (helminths).

These conditions also increased the risk of disease outbreaks during the period. Additionally, damp environments raised the likelihood of coccidiosis, which is a poultry disease caused by a parasite that affects the digestive tract of birds. For fish farmers, heavy rainfall and runoff can reduce pond water quality and increase the risk of contamination or disease outbreaks. Small ruminants benefit from lush vegetation, providing better forage.

However, the wet environment also heightens the risk of foot rot (a hoof infection), parasitic infections, and respiratory diseases. To mitigate these risks, farmers should monitor livestock for signs of foot rot and ensure proper drainage around animal pens to prevent waterlogging. Regularly inspecting animals for ticks or signs of worm infestation can help control ectoparasites. Fish farmers can reduce contamination risk by regularly checking pond water quality and limiting runoff entry. Poultry keepers should maintain dry bedding, watch for symptoms of coccidiosis (such as lethargy or diarrhea), and treat affected birds promptly. These steps can help protect animal health during the rainy season.

2.0 Soil Moisture Conditions Across Nigeria in April 2025

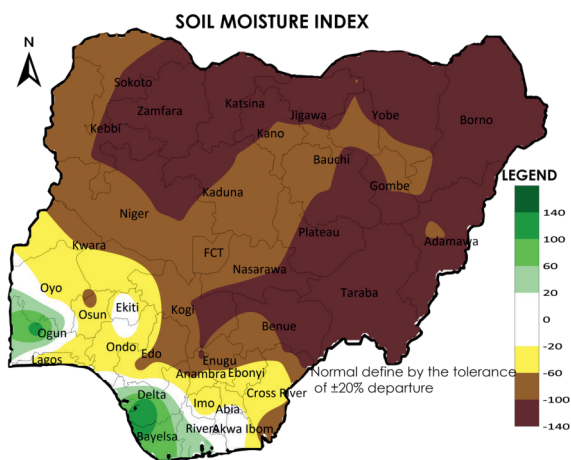


Figure 2: Soil Moisture Index (SMI) across Nigeria in April 2025.

Figure 2 illustrates the distribution of soil moisture conditions across Nigeria in April 2025. Quantitative analysis reveals that soil moisture levels were approximately 20 to 30% below the long-term average across most northern, central, and eastern states, a direct consequence of the prevailing dry northeasterly winds during this period. In contrast, specific southern states—namely Ogun, Delta, Rivers, Bayelsa, Imo, and Akwa Ibom states — recorded surplus soil moisture, with levels exceeding the long-term average by 10 to 15%.

These marked disparities indicate that available pasture and surface water resources are likely to diminish significantly in the northern states, while the southern states may have relatively improved conditions for grazing. As a result, pastoralists are expected to migrate southward in search of pasture and water, particularly towards Ogun, Delta, and Rivers states.

This migration could intensify competition for natural resources, heightening the risk of conflicts between pastoralist and farming communities.

To address these challenges, proactive pasture management and conflict-prevention strategies are essential. Recommended actions include establishing early warning systems to monitor and communicate impending resource shortages, facilitating regular dialogue and cooperation between pastoralist and farming communities to resolve disputes amicably, and investing in water infrastructure projects—such as boreholes and small reservoirs—in high-risk areas. These measures will help mitigate resource scarcity, reduce the likelihood of conflict, and promote more sustainable livestock management practices in the affected areas.

3.0 Temperature Distribution Across Nigeria in April 2025

3.1 Maximum (Daytime) Temperature Distribution

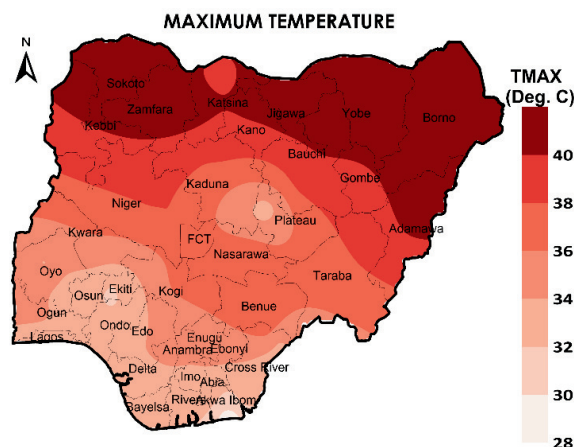


Figure 3: Maximum Temperature Distribution Across Nigeria in April 2025.

As shown in Figure 3, daytime temperatures increased slightly in April 2023, coinciding with the seasonal transition period. Maximum temperatures ranged from 28.7°C to 41.7°C, with the highest (41.7°C) recorded in Maiduguri (Borno State), and the lowest (28.7°C) in Eket (Akwa Ibom State). Maiduguri, located in the arid northeast of Nigeria, typically experiences higher temperatures due to its dry, semi-desert climate, while Eket in the humid south is known for its milder and more stable climate. Temperatures were particularly high in the extreme north of the country, where most of the states recorded temperatures above 40.0°C, while the southern states experienced lower ranges of temperatures between 28.7°C and 35.0°C.

These elevated temperatures present considerable stress risks for livestock. Prolonged exposure to heat can negatively affect reproductive efficiency in both male and female animals, resulting in diminished production of milk, meat, and eggs. For example, according to Smith et al. (2021), prolonged heat exposure can reduce milk yield by up to 20% in dairy cattle. Heat stress also reduces blood circulation to the digestive system, disrupts metabolic processes, and hinders nutrient absorption. For breeding stock, this may lead to decreased fertility, inadequate embryonic development, nutritional deficiencies, and increased stillbirth rates.

3.2: Minimum Temperature Distribution Across Nigeria in April 2025

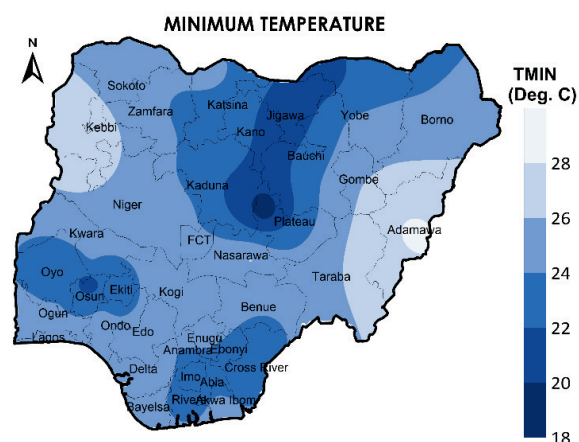


Figure 4: Minimum Temperature Across Nigeria in April 2025.

Figure 4 shows the minimum (nighttime) temperatures recorded across Nigeria in April 2025. During this period, minimum temperatures ranged from 18.7°C in Jos (Plateau State) to 28.3°C in Yola (Adamawa State). Notably, these minimum temperatures are approximately 2°C higher than the historical average for April, indicating an unusually warm period. The sudden drops in nighttime temperature in areas with low temperatures could predispose young animals and poultry to respiratory infections if housing is poorly ventilated, while persistently warm nights in locations like Yola (Adamawa State) could limit recovery from daytime heat stress.

This sustained thermal load can suppress animal growth rates, reduce fertility, and increase water demand. Farmers in regions experiencing cooler nights should ensure proper ventilation in animal housing, while those in warmer areas should provide additional water sources and shade to help animals cope with heat stress.

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

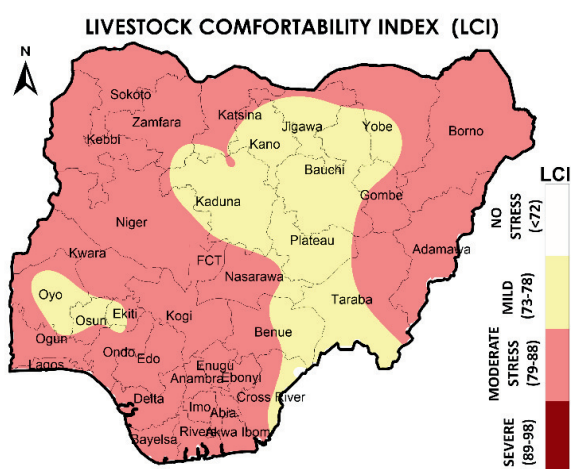


Figure 5: Livestock Comfortability Index for April 2025.

Figure 5 illustrates the Livestock Comfortability Index (LCI) across Nigeria in April 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 reveals that northern states such as Kano and Sokoto experienced moderate heat stress conditions, with LCI values ranging between 75 and 80, while the southern states like Lagos and Port Harcourt recorded only mild heat stress, with LCI between 65 and 70. This regional variation indicates that livestock in the northern parts of the country were subjected to harsher thermal conditions than those in the southern states, increasing their risk of heat-related productivity losses.

During this period, livestock in areas under moderate heat stress conditions are likely to experience increase in respiratory rates, reduced feed intake, and significant declines in fertility, milk production, and meat yield. While conditions in the south were somewhat more favorable, animals in both mild and moderate stress zones remain vulnerable to reduced productivity and increased water requirements.

To mitigate these impacts, farmers are encouraged to provide additional shade, increase water availability, and adjust feeding times to cooler parts of the day. These measures can help livestock better cope with heat stress and maintain optimal performance.

4.0 Normalized Difference Vegetation Index (NDVI)

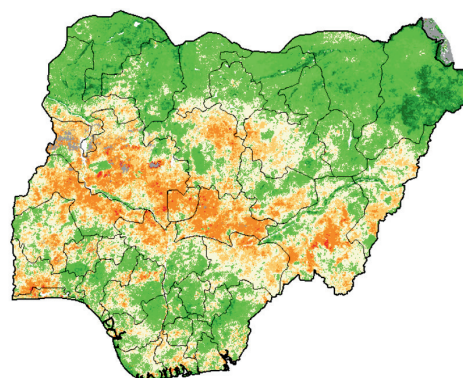


Figure 5: Normalized Difference Vegetation Index 2025

The Normalised Difference Vegetation Index (NDVI) is a widely used measure for assessing the health and density of green vegetation using remote sensing satellite images.

It ranges from negative indicating sparse or stressed vegetation, to positive, which reflect lush, healthy plant growth. When comparing NDVI readings, often refer to the Long-Term Average (LTA), which is the typical NDVI value for a given area based on many years of data. This comparison is important because it highlights whether current vegetation conditions are better or worse than usual.

In April 2025, NDVI patterns across Nigeria varied considerably. The far northern states of Nigeria experienced above-average NDVI values, indicating early recovery of pasture, likely helped by timely rainfall or recent improvements in land management. In contrast, much of the central zone—including Plateau, Benue, Nasarawa, Niger, and Kogi states—had NDVI values between 5% and 20% below the LTA, suggesting less vegetation than normal. This deficit may be due to lower rainfall, delayed seasonal rains, or changes in land use such as increased farming or grazing pressure. The southwest and southeast of Nigeria showed a mixture of vegetation conditions in April 2025. While the NDVI in parts of Cross River, Delta, Edo, and the coastal states was over 10% above the LTA (indicating abundant vegetation), it was 5% to 10% below the LTA in some inland areas including Osun and Ekiti states, indicating localised vegetation shortages in those parts of the country. Generally, the southern states maintained better forage conditions. This could be attributed to the good rainfall recorded in the southern states in April 2025.

These NDVI observations have practical implications for farmers, livestock keepers, and policymakers. Areas with above-average vegetation are likely to have improved pasture for grazing and better conditions for crop growth, supporting food security and livestock health. However, regions with vegetation deficits could face reduced pasture availability, putting stress on livestock and increasing the risk of lower crop yields. This can lead to higher feed costs, potential livestock losses, and challenges for communities that rely on agriculture for their livelihoods. Understanding and responding to these patterns is crucial for planning, early warning, and ensuring the resilience of Nigeria's food systems.

5.0 Weather/Agricultural Outlook for May 2025

5.1 Weather Forecast April 2025

In May 2025, the Inter Tropical Discontinuity (ITD)—which refers to the boundary between moist, rain-bearing air from the south and dry, dusty air from the north in the tropics—is expected to shift northward, reaching an average position of 11.20°N. The movement of the ITD is significant because, as it advances northwards, it typically allows the deeper incursion of the moisture-laden southwesterlies, bringing increased rainfall to the regions. In this case, the northward progression of the ITD is anticipated to boost rainfall across Nigeria, supporting agricultural activities and pasture regeneration nationwide.

5.1.1 Rainfall Forecast for May 2025

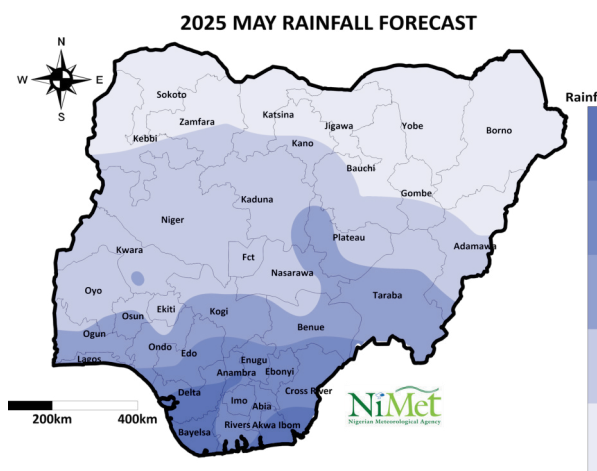


Figure 6: Rainfall Forecast for May 2025

(i) The forecast predicts 200mm to 400mm of rainfall in most parts of the southern states

including Lagos, Cross River, Delta, Edo, and other coastal areas, in May 2025.

(ii) For the central states, including Plateau, Benue, Nasarawa, Niger, and Kogi, rainfall is expected to range from 80mm to 200mm over the course of May 2025.

(iii) In the northern states, such as Borno, Yobe, Jigawa, Sokoto, Kebbi, and Katsina, the forecast anticipates moderate rainfall amounts between 0mm and 80mm in May 2025.

5.1.1 Rainfall Forecast for May 2025

- **Southern States (Coastal & Inland):**

- Increased rainfall across the southern states of the country is expected to improve pasture growth, providing more abundant forage and helping to reduce heat stress in livestock. However, heavy or prolonged rains could also lead to flooding of ponds. This may affect aquaculture.

Prolonged rainfall may also cause waterlogging of grazing areas, increases and increase the risk of diseases such as foot rot, a bacterial infection that affects the hooves, leading to lameness and reduced mobility in animals. Additionally, damp conditions favor the spread of parasitic infections, particularly gastrointestinal worms and liver flukes, which can cause weight loss, diarrhea, and reduced productivity in livestock.

- To minimize these risks, livestock managers should regularly monitor grazing areas for signs of waterlogging and conduct frequent hoof inspections to detect early signs of disease. Prompt removal of animals from flooded or excessively wet pastures, combined with timely veterinary care, can help prevent outbreak of livestock diseases and maintain herd health.

- **Central States:**

- The forecasted rainfall for May 2025 in the central states is generally favorable for gradual pasture regeneration and the replenishment of water sources, supporting moderate grazing. However, rainfall distribution may be uneven, leaving some areas drier than others and potentially limiting available availability of forage.

- Livestock managers are encouraged to employ adaptive strategies such as rotational grazing to prevent overgrazing in well-watered areas and to consider supplemental feeding in drier areas. Regular assessment of pasture conditions and flexible grazing plans can help ensure consistent nutrition and reduce the risk of pasture degradation.
- **Northern States:**
 - Some improvement in rainfall will support limited pasture regeneration and increase surface water availability in the northern states. Nonetheless, pasture resources are still likely to remain scarce in this part of the country. Consequently, livestock may continue to move long distances to find forage and water, increasing stress and reducing productivity.

5.2 Temperature Forecast for May 2025

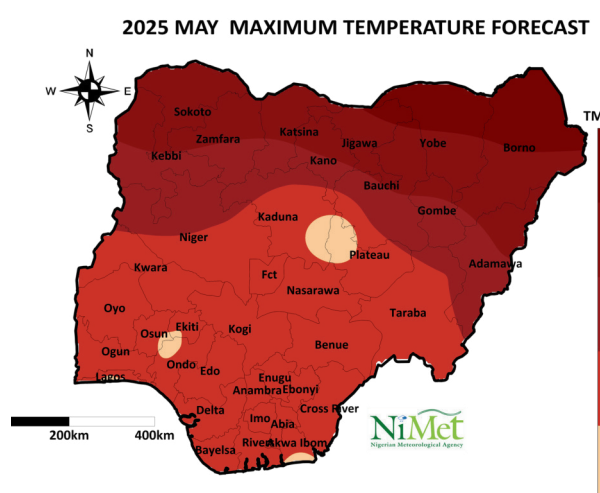


Figure 7: Maximum Temperature Forecast for May 2025

A maximum (or daytime) temperature range of 40°C to 45°C is anticipated across most parts of Borno, Yobe, Jigawa, Sokoto, Kebbi, Zamfara, Katsina, Kano, Bauchi, Gombe, parts of Niger, and Adamawa states. Such very hot weather is likely to induce significant heat stress in livestock, resulting in reduced feed intake, higher water demand, and lower productivity. For example, in cattle, milk yield can drop by as much as 15-25% during prolonged heat waves, and in poultry, egg production may decrease by 10-20%. In severe cases, heat stress can lead to increased mortality rates, especially among vulnerable animals. Farmers are strongly advised to implement mitigation strategies, such as providing ample shade, ensuring constant access to clean water, and improving ventilation in animal shelters to reduce the risk of heat-related losses.

The temperatures in the central states of Niger, Nasarawa, Benue are expected to range from 30°C to 40°C, which can still cause moderate to severe heat stress, particularly in animals exposed to direct sunlight for extended periods. Proactive steps—like rotational grazing to minimize crowding and heat buildup, as well as supplemental feeding and regular health checks—can help sustain livestock health and productivity under these conditions.

A temperature range between 30°C and 35°C is expected over Ekiti, Lagos, Bayelsa, parts of Kaduna, Taraba, Plateau, Ogun, Osun, Ondo, Edo, Delta, Rivers, Akwa Ibom, and Cross River states.

A temperature range between 30°C and 35°C is expected over Ekiti, Lagos, Bayelsa, parts of Kaduna, Taraba, Plateau, Ogun, Osun, Ondo, Edo, Delta, Rivers, Akwa Ibom, and Cross River states.

While these temperatures are relatively mild, high humidity in these areas may still negatively affect sensitive animals such as poultry and young stock, especially in poorly ventilated housing. For instance, broilers and layers can suffer from increased mortality and a 5 to 10% reduction in weight gain or egg output. In aquaculture, high daytime temperatures ($\geq 35^\circ\text{C}$) combined with elevated humidity reduce dissolved oxygen in ponds, leading to stress, stunted growth, and, in extreme cases, fish kills. To mitigate these risks, fish farmers should consider aerating ponds during hot spells and monitoring water quality closely.

5.2 Temperature Forecast for May 2025

(i) In the Northern States - High Temperatures (40°C to 43°C)

- Increased risk of heat stress, leading to reduced feed intake, poor weight gain, and lower milk and egg production.
- Higher water demand and risk of dehydration, especially where water access is limited.
- Possible reproductive challenges, including reduced fertility and embryonic losses.
- Increased vulnerability to diseases and mortality under extreme heat.

(ii) In the Central States - Moderate Temperatures (30°C to 40°C):

- Conditions may cause moderate to severe heat stress, particularly in animals exposed to direct sunlight for long periods.
- Animals may show reduced productivity, increased water intake, and lower reproductive efficiency if cooling measures are not provided.

(iii) In the Southern States - Lower Temperatures (30°C to 35°C)

- The lower temperatures in the southern states are more favorable for livestock comfort, with reduced heat stress; however, high humidity in these zones can compound heat effects, leading to stress in poultry, increased risk of coccidiosis, and reduced egg production
- Supports better feed intake, fertility, and productivity compared to hotter zones.
- Small ruminants may also be at risk of parasitic infestations due to damp ground conditions.

5.3 Minimum Temperature Forecast for May 2025

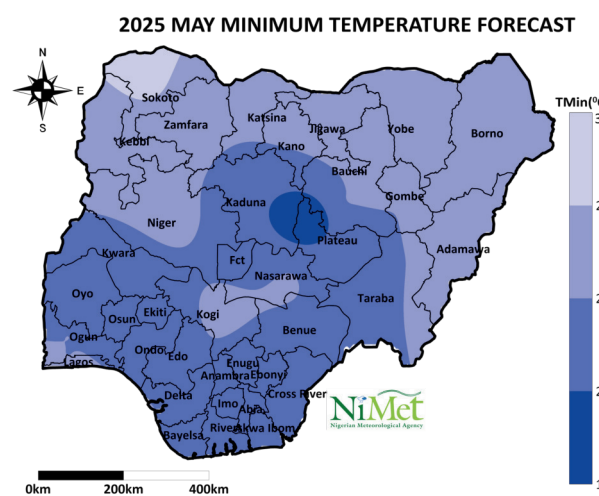


Figure 8: Minimum Temperature Forecast for May 2025

Minimum temperatures of 15°C to 20°C are expected over parts of Plateau State. In Sokoto, Jigawa, Yobe, Kebbi, Zamfara, Katsina, Kano, Bauchi, parts of Borno, Gombe, and Adamawa, nighttime temperatures will remain between 25°C and 30°C, providing some relief from the intense daytime heat. The rest of the country is expected to experience minimum temperatures of 20°C to 25°C, which offer moderate nighttime comfort.

5.3.1 Implications of the Forecast Nighttime Temperatures for Livestock

(i) In the Northern States:

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

(ii) In the Southern States:

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

5.4 Relative Humidity Forecast for May 2025

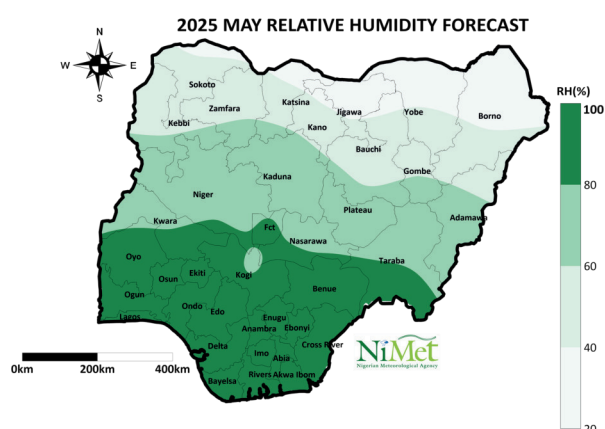


Figure 9: Relative Humidity Forecast for May 2025

The forecast for relative humidity for May 2025 is presented in Figure 9. During the month, humidity levels are expected to increase nationwide, with the highest values anticipated in the southern states. Combined with the rising temperatures typical of this period, these conditions will significantly heighten heat stress risks for livestock. Dairy cows, poultry, and pigs are particularly vulnerable, as the combination of high heat and humidity limits their ability to regulate body temperature, leading to reduced productivity, increased water demand, and higher mortality risks if not properly managed.

5.4.1 Implications of May 2025 Relative Humidity Forecast for Livestock

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

- 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.
- Coastal areas: Persistently high humidity may encourage parasite infestations and vector-borne diseases, necessitating preventive health measures.

5.5 Weather Advisory for Livestock Farmers in May 2025

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

Grazing!

- In the northern states. Marginal improvement in forage and water availability is expected during the month.
- In the central states: manage rotational grazing to sustain regenerating pastures.
- In the southern states, forage is available, but high humidity increases risks of coccidiosis, ticks, trypanosomiasis, and helminths; therefore, regular veterinary checks are essential.
- Monitor animal health closely, especially for parasites and waterborne diseases.

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.
- Avoid transportation or movement of animals during the hottest hours of the day (i.e., from 12 noon to 4 p.m.).
- Monitor animals for signs of heat stress: excessive panting, reduced appetite, or lethargy.
- Supplement feed with crop residues or concentrates.



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 in shaded areas.
- Promote pasture preservation by making hay or silage from crop residues and excess grasses before the peak dry season.
- Avoid breeding or artificial insemination during extreme hot periods unless cooling measures are in place.



Poultry & Pigs

- 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 southern states of the country, where wet conditions favor parasite buildup.
- Ensure waterers are shaded and cleaned frequently to encourage water intake.
- Use improved housing/ventilation for poultry to maintain egg and meat production.



Aquaculture (Cat Fish, Tilapia, etc.)

- 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 southern states of the country, where wet conditions favor parasite buildup
- Ensure waterers are shaded and cleaned frequently to encourage water intake.
- Use improved housing/ventilation for poultry to maintain egg and meat production.



Micro-livestock (Snails, Rabbits)

- 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 southern states of the country, where wet conditions favor parasite buildup
- Ensure waterers are shaded and cleaned frequently to encourage water intake.
- Use improved housing/ventilation for poultry to maintain egg and meat production.



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.

May 2025

Summary

This edition of the Livestock Weather Bulletin provides a clear and actionable overview of weather information to support livestock farming and management across Nigeria in May 2025. The Bulletin also provides advisories for mitigating the potential adverse effects of weather conditions on livestock during the month. The summary of this edition of the Bulletin is as follows:

- In May 2025, the observed rainfall across Nigeria ranged from 11 to 418 mm, with the highest in Port Harcourt (Rivers State) and the lowest in Dutse (Jigawa State);
 - Warm daytime highs were recorded across Nigeria during the month, with 41.8°C in Nguru (Yobe State) and 28.4°C in Eket (Akwa Ibom State).
 - 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.
 - Weather forecasts indicate heavier rainfall in the south (200 to 400 mm), moderate to heavy rainfall in the central states (80 to 320 mm), and moderate rainfall (0 to 200 mm) in the northern states.
- Maximum (daytime) temperatures ranging from 40°C to 42°C are expected in the northern states. Milder daytime temperatures ranging from 30 °C to 40 °C are expected in central and 30 °C to 35°C southern states.
 - High temperatures threaten herds nationwide, making supplemental feed and water essential. Rotational grazing is required to manage regenerating pastures. In the southern states, measures to mitigate humidity-related risks like parasites and waterlogging are required.
 - 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 May 2025

1.1 Rainfall Amount

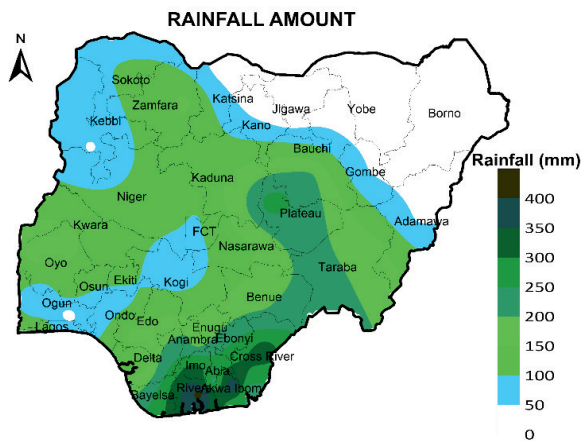


Figure 1: Rainfall Amount across Nigeria in May 2025.

Rainfall amounts across Nigeria in May 2025 are shown in Figure 1. The highest rainfall totals were recorded in Rivers, Akwa Ibom, Imo, Cross River, Delta, and Bauchi states, ranging from 20 to 418 mm. Other parts of the country received 11 to 190 mm of rainfall, with the highest rainfall in Port Harcourt (Rivers State) and the lowest in Dutse (Jigawa State). The rains were heavier in the south and more widely distributed in May compared to April, supporting good pasture growth and improved water availability for grazing animals. The northern states, such as Sokoto, Zamfara, and Kaduna, also recorded sufficient rainfall, favorable for pasture regeneration.

Caution!

While these rains enhance soil moisture and pasture growth, farmers should be cautious. In the southern states, high humidity combined with heavy rainfall may lead to waterlogging, increase the spread of ectoparasites (ticks and helminths), and raise the risk of livestock disease outbreaks.

Persistently wet conditions can also increase the chances of coccidiosis in poultry. For fish farmers, heavy rainfall and runoff may compromise pond water quality, heightening the risk of contamination and diseases. Although lush vegetation provides better forage for small ruminants, wet conditions may increase susceptibility to foot rot, parasitic infestations, and respiratory illnesses.

2.0 Soil Moisture Conditions Across Nigeria in May 2025

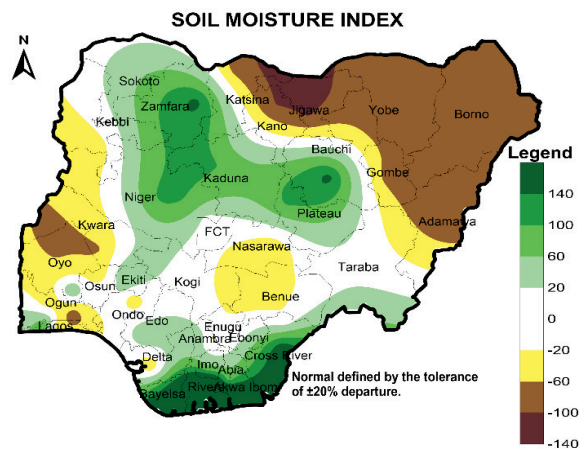


Figure 2: Soil Moisture Index (SMI) across Nigeria in May 2025.

Figure 2 shows the distribution of soil moisture conditions across Nigeria in May 2025. Most parts of the country experienced normal to below-normal soil moisture levels, reflecting limited rainfall accumulation in those areas. However, above-normal (surplus) soil moisture was observed in parts of Sokoto, Zamfara, Kebbi, Katsina, Kano, Kaduna, Niger, Bauchi, Plateau, Taraba, Edo, Oyo, Ogun, Lagos, Cross River, Akwa Ibom, Bayelsa, and Rivers states.

Implications for pasture availability

In some northern states and parts of the central states, the surplus soil moisture will encourage early green-up of grasses and browse species, improving pasture availability for grazing livestock. However, in areas that remained normal to below-normal, pasture regeneration will still be patchy and inadequate, which limits feed supply. This may compel animals to graze over larger areas.

Above-normal soil moisture in the southern states supports pasture growth, providing good-quality forage for cattle, goats, and sheep. However, prolonged wetness increases the risks of waterlogging in low-lying grazing fields and the incidence of foot rot and parasitic infestations in livestock.

3.0 Temperature Distribution Across Nigeria in May 2025

3.1 Maximum (Daytime) Temperature Distribution

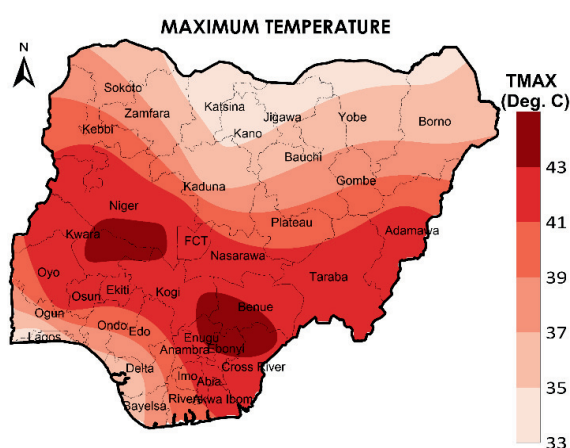


Figure 3: Maximum Temperature Distribution Across Nigeria in May 2025.

As presented in Figure 3, daytime temperatures increased slightly in May.

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

Maximum temperatures range between 39°C and 41.8°C, with Sokoto, Kebbi, Zamfara, Yobe, Jigawa, Kano, and parts of Katsina recording the highest values ($\geq 40^\circ\text{C}$). These extreme temperatures reflect the peak of pre-rainy season hot weather which is characteristic of the semi-arid Sahel.

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

Most areas recorded 33.0°C-38.0°C; Plateau State was relatively cooler (29.8°C).

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

Temperatures recorded were between 33°C and 35°C, relatively lower compared to the northern states. This is due to higher rainfall, cloud cover, and coastal influences.

The high temperatures recorded, especially in the north, can reduce pasture quality through increased evapotranspiration, raise water demand for livestock, and heighten the risk of heat stress, reduced milk yield, and fertility problems.

3.2: Minimum Temperature Distribution Across Nigeria in May 2025

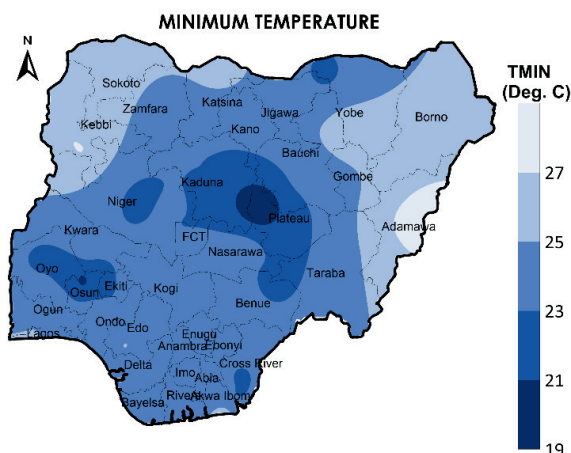


Figure 4: Minimum Temperature Across Nigeria in May 2025.

Figure 4 shows the minimum (nighttime) temperatures recorded across Nigeria in May 2025. During this period, minimum temperatures ranged from 19.0°C in Jos (Plateau State) to 27.7°C in Yola (Adamawa State). Sudden drops in nighttime temperature in cooler areas could predispose young animals and poultry to respiratory infections, particularly when housing is poorly ventilated. Conversely, persistently warm nights in some locations, such as Yola (Adamawa State), Yelwa (Kebbi State), Potiskum (Yobe State), and Maiduguri (Borno State), may limit or inhibit livestock recovery from daytime heat stress. This sustained thermal load can suppress growth rates, reduce fertility, and increase water demand of livestock.

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

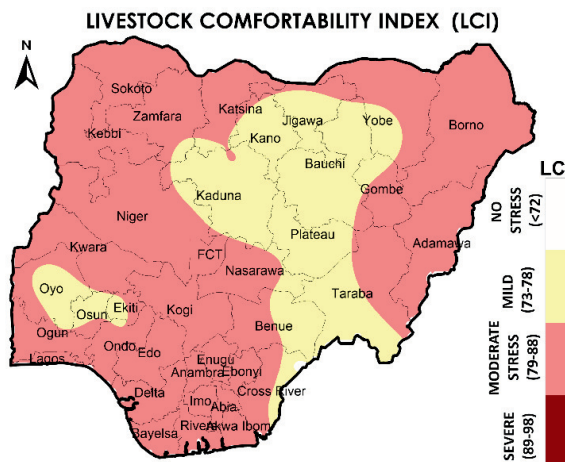


Figure 5: Livestock Comfortability Index in May 2025.

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

During the period, mild to moderate heat stress was observed across much of the country.

Implications for Livestock

- Animals typically experience increased respiratory rates and panting as mechanisms to dissipate excess body heat, which in turn elevates energy expenditure.

- Reduced feed intake is common, leading to slower weight gain and reduced growth performance.
- Dairy cattle and beef cattle, and small ruminants, decreased milk yield and lower butterfat content, reduced carcass quality, and could disrupt estrus expression, lower conception rates, and increase embryonic losses.
- Poultry: Reduced egg production, smaller egg size, and thinner shells, while broilers grow more slowly and have poorer feed conversion efficiency.
- Beyond productivity, moderate heat stress increases water demand and predisposes animals to metabolic disorders and diseases by weakening immune response, further undermining livestock health and farm profitability.

4.0 Normalized Difference Vegetation Index (NDVI)

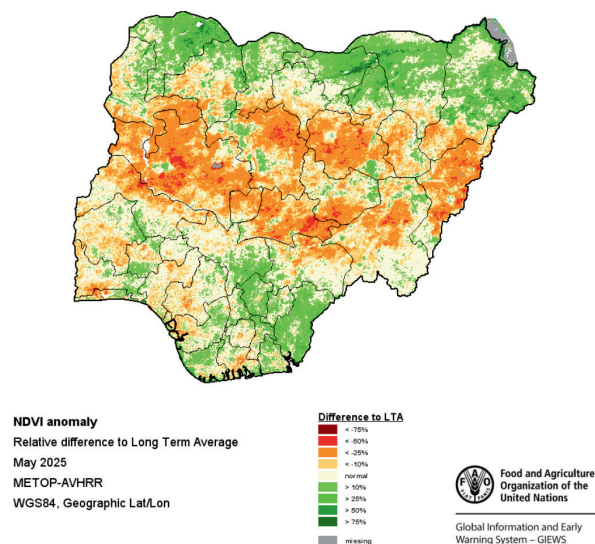


Figure 5: Normalized Difference Vegetation Index for May 2025

The NDVI across Nigeria in May 2025 is shown in Figure 5.

Vegetation deficits (>25% below Long-Term Average (LTA) were widespread in the Northcentral and parts of Northwest/Northeast, raising concerns about pasture availability in those areas. In contrast, the vegetation is favourable (>25%–50% above LTA) in parts of Oyo, Ogun, Osun, Ondo, Ekiti, Lagos, Anambra, Imo, Enugu, Abia, Ebonyi, Rivers, Cross River, Akwa Ibom, Bayelsa, Edo, and Delta states, supporting better forage growth and indicating good vegetation conditions. This improvement is driven by sustained rainfall in the southern and parts of the Northeast.

5.0 Weather/Agricultural Outlook for June 2025

5.1 Weather Forecast June 2025

In June 2025, a northward pull of the Inter-Tropical Discontinuity (ITD) is expected to reach an average position of 16.7°N. Good moisture influx and velocity potential are expected to enhance the prospects of heavy rainfall across the southern and central states of the country.

5.1.1 Rainfall Forecast for May 2025

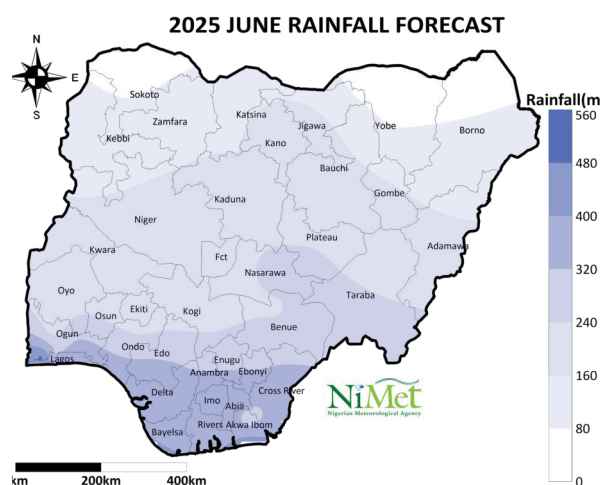


Figure 6: Rainfall Forecast for June 2025

(i) High Rainfall Amounts in the Southern States:

The forecast predicts 200mm to 400mm 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.

(ii) Moderate to High Rainfall in the Central States:

The central states are forecasted to receive 80mm to 320mm of rainfall during the period.

(iii) Moderate Rainfall in the Northern States:

The northern states are expected to experience 0 to 200mm of rainfall in June 2025.

5.1.2 Implications of the Rainfall Forecast for Livestock:

• Southern States (Coastal & Inland):

- Increased moisture will support lush, rapid growth of grasses and forages, providing more abundant feed for grazing animals. However, heavy rains also pose risks of pond flooding (for aquaculture) and waterlogging in low-lying grazing

areas, which may increase the incidence of foot rot and parasitic infections.

• Central States:

- The expected weather conditions are generally favorable for pasture regeneration and water recharge, supporting moderate grazing activities. Nevertheless, uneven rainfall distribution may still leave some pockets of places in dry conditions, requiring careful grazing management.

• Northern States:

- The improved rainfall in the northern states will help pasture regeneration and surface water availability. However, pasture resources will remain relatively scarce, and animals may still need to move for long distances in search of forage and water. This could increase livestock stress and reduce productivity.

5.2 Temperature Forecast for June 2025

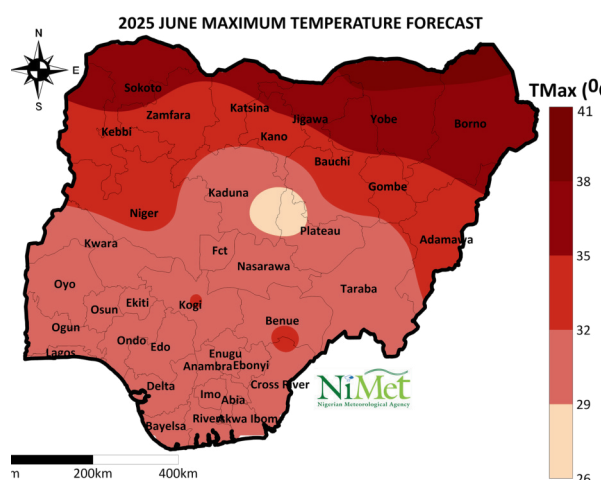


Figure 7: Maximum Temperature Forecast for June 2025

A maximum (or daytime) temperature range of 38°C to 41°C is anticipated across most parts of Borno, Yobe, Jigawa, Sokoto, Kebbi, Zamfara, Katsina, Kano, Bauchi, Gombe, parts of Niger, and Adamawa states. The temperatures in the central states are expected to range from 33.0°C to 40 °C. Such elevated temperatures are likely to induce heat stress in livestock, resulting in reduced feed intake, higher water demand, lower productivity, and, in severe cases, increased mortality.

A temperature range between 30°C and 35°C is expected over Ekiti, Lagos, Bayelsa, parts of Kaduna, Taraba, Plateau, Ogun, Osun, Ondo, Edo, Delta, Rivers, Akwa Ibom, and Cross River states. While relatively milder, these temperatures, coupled with high relative humidity, may still affect sensitive animals such as poultry and young stock, particularly where the housing for the animals is poorly ventilated.

5.2.1 Implications of the Forecast Daytime Temperatures for Livestock

(i) In the Northern States - High Temperatures (38°C to 40°C)

- Increased risk of heat stress, leading to reduced feed intake, poor weight gain, and lower milk and egg production.
- Higher water demand and risk of dehydration, especially where water access is limited.
- Possible reproductive challenges, including reduced fertility and embryonic losses.
- Increased vulnerability to diseases and mortality under extreme heat.
- High chances of metabolic disorder (ruminal Acidosis in cattle due to changes in feeding patterns)

(ii) In the Central States - Moderate Temperatures (33°C to 40°C):

- Conditions may cause moderate to severe heat stress, particularly in animals exposed to direct sunlight for long periods.
- Animals may show reduced productivity, higher water intake, and lower reproductive efficiency if cooling measures are not provided.

(iii) In the Southern States - Lower Temperatures (30°C to 35°C)

- The lower temperatures in the southern states are more favorable for livestock comfort, with reduced heat stress; however, high humidity in these zones can compound heat effects, leading to stress in poultry, increased risk of coccidiosis, and reduced egg production
- Supports better feed intake, fertility, and productivity compared to hotter zones.
- Small ruminants may also be at risk of parasitic infestations due to damp ground conditions.

Gombe, and Adamawa States. The remaining parts of the country are likely to experience a temperature range of 20°C to 25°C.

5.3.1 Implications of the Forecast Nighttime Temperatures for Livestock

(i) In the Northern States:

- The warmer nights across most northern with temperatures in the range of 20 °C to 29 °C may exacerbate the heat stress that is already affecting livestock in those areas, reducing feed efficiency and fertility if not properly managed.

(ii) In the Southern States:

- Livestock are likely to experience relatively favourable thermal conditions, supporting stable productivity.
- However, high day-night temperature variation may affect animal metabolism and feed utilization.

5.3 Minimum Temperature Forecast for June 2025

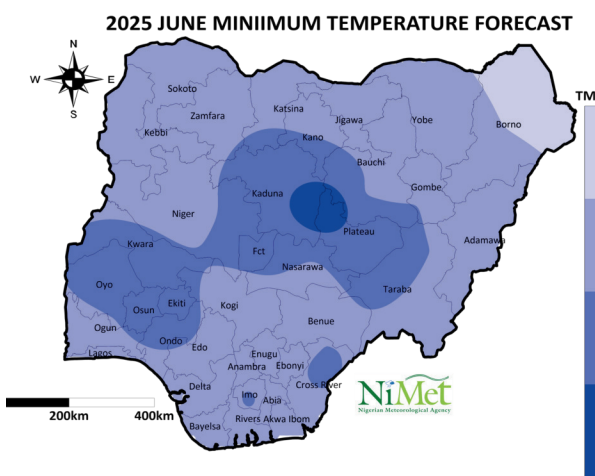


Figure 8: Minimum Temperature Forecast for June 2025

The forecast for the minimum (nighttime) temperatures across Nigeria for June 2025 is presented in Figure 8. Minimum temperatures below 15°C to 20°C are expected over parts of Plateau State, while values between 20 and 29°C are anticipated in Sokoto, Jigawa, Yobe, Kebbi, Zamfara, Katsina, Kano, Bauchi, parts of Borno,

5.4 Relative Humidity Forecast for June 2025

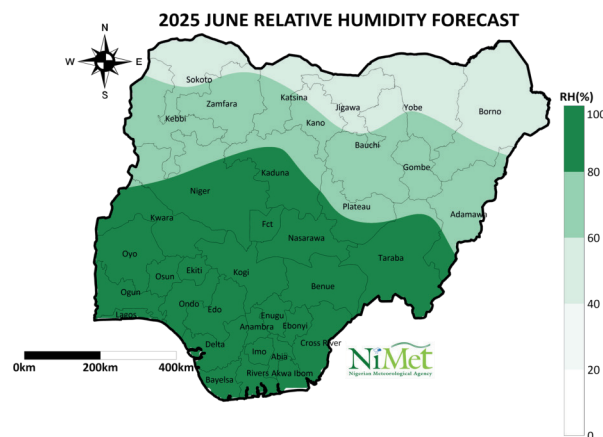


Figure 9: Relative Humidity Forecast for June 2025

The forecast for June 2025, as shown in Figure 9, shows a nationwide increase in relative humidity, with the highest levels expected across the southern and central states. When combined with the rising temperatures typical of this period, these conditions intensify heat stress risks for livestock. Dairy cows, poultry, and pigs are especially vulnerable, as high temperatures coupled with elevated humidity limit their ability to dissipate body heat. This can result in reduced productivity, greater water requirements, and increased mortality risks if appropriate management measures are not implemented.

5.4.1 Implications of June 2025 Relative Humidity Forecast for Livestock

- Poultry and pigs: These species have low tolerance for hot and humid weather 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 may encourage parasite infestations and vector-borne diseases, necessitating preventive health measures.

5.5 Weather Advisory for Livestock Farmers in July 2025

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

Grazing!

- Improvement in forage and water availability is expected in the northern and central states in July 2025. However, due to the risk of unevenness, pastoralists should practice rotational or controlled grazing to prevent overgrazing of the good patches and allow areas to recover when it rains.
- In the southern states, forage is available, but high humidity increases risks of coccidiosis, ticks, trypanosomiasis, and helminths. therefore, Regular veterinary checks are therefore vital.
- Animal health should be monitored closely, especially for parasites and waterborne diseases

5.5.1 General Advisory for All Livestock Farmers

- Provide regular access to clean, cool drinking water for farm animals (preferably fortified with electrolytes or multivitamins).
- Ensure adequate ventilation in housing structures.
- Avoid transportation or movement of animals during the hottest hours of the day (i.e., 12 noon to 4 p.m.).
- Monitor animals for signs of heat stress: excessive panting, reduced appetite, or lethargy.
- Supplement feed with crop residues or concentrates.



Cattle (Beef & Dairy)

- Reduce stocking density in pens or kraals to minimize heat buildup.
- Use shaded structures or plant live fences (e.g., neem, moringa) around open pens.
- Provide sprinkler systems or shallow wallowing pools for cooling.
- Encourage rotational grazing in shaded areas.
- Promote pasture preservation by making hay or silage from crop residues and excess grasses before the peak dry season.
- Avoid breeding or artificial insemination during extreme hot periods unless cooling measures are in place.



Poultry & Pigs

- 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 favour the buildup of parasite
- Ensure that waterers are shaded and cleaned frequently to encourage water intake.
- Use improved housing/ventilation for poultry to maintain egg and meat production.



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 temperature spikes.
- Change water regularly, especially in concrete or plastic tanks, to prevent heat buildup.
- Feed during cooler times of the day (i.e., 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.

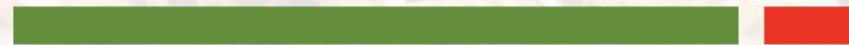


Small Ruminants (Sheep and Goats)

- Provide dry resting areas, trim hooves regularly, and implement deworming and tick control programs.
- Avoid continuous grazing on waterlogged fields.

**Conflict Risk Advisory
(Pastoral Migration)**

- Monitor and engage with pastoralist communities as migration to the 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.



June 2025

Summary

This edition of the Livestock Weather Bulletin provides a clear and actionable overview of weather information to support livestock farming and management across Nigeria in June 2025. The Bulletin also provides advisories for mitigating the potential adverse effects of weather conditions on livestock during the month. The summary of this edition of the Bulletin is as follows:

- In June 2025, rainfall amounts in Nigeria ranged from 44.1 mm to 565.3 mm, with the highest in Calabar (Cross River State) and the lowest in Maiduguri (Borno State);
 - Warm daytime highs were recorded across Nigeria during the month, with 40.8°C in Nguru (Yobe State) and 27.1°C in Eket (Akwa Ibom State).
 - 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.
 - Weather forecasts indicate heavier rainfall in the south (200 to 400 mm), moderate to heavy rainfall in the central states (80 to 320 mm), and moderate rainfall (0 to 200 mm) in the north.
- Maximum (daytime) temperatures ranging from 40°C to 42°C are expected in the northern states. Milder daytime temperatures ranging from 30 °C to 40 °C are expected in central and 30 °C to 35°C southern states.
 - High temperatures threaten livestock nationwide, making supplemental feed and water essential during the period. Rotational grazing is required to manage regenerating pastures. In the southern states, measures to mitigate humidity-related risks, such as parasites and waterlogging are required.
 - 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 June 2025

1.1 Rainfall Amount

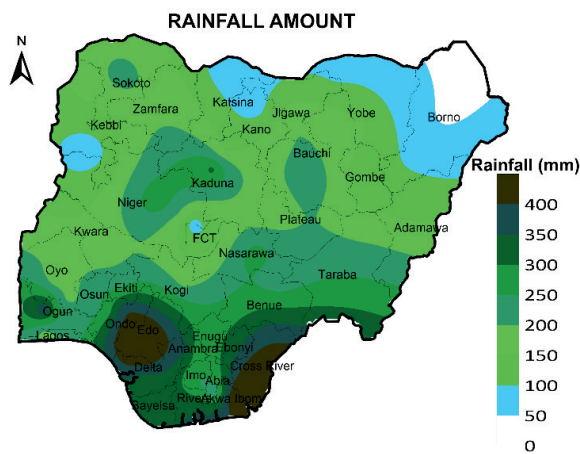


Figure 1: Rainfall Amount across Nigeria in June 2025.

Rainfall amounts across Nigeria in June 2025 are shown in Figure 1. Rainfall across Nigeria in June 2025 was more widely distributed than in previous months, with amounts ranging between 44.1 mm and 565.3 mm and significant spatial variation. The highest rainfall total was recorded in Calabar (Cross River State), while the lowest was observed in Maiduguri (Borno State).

In June, there was lush green forage in the southern states of the country but faced higher disease risks. The high rainfall also supported the regeneration of pasture in the northern states

2.0 Soil Moisture Conditions Across Nigeria in June 2025

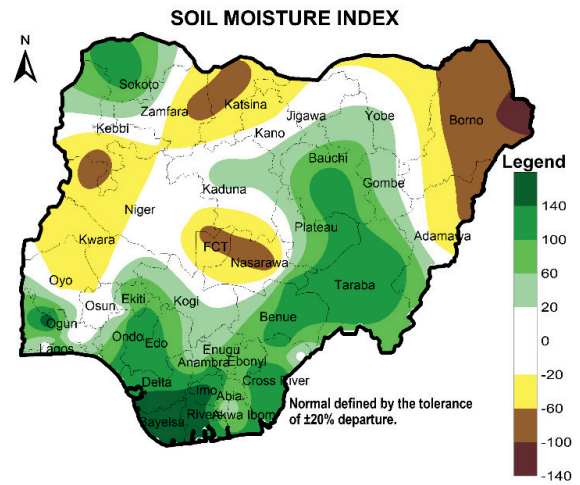


Figure 2: Soil Moisture Index (SMI) across Nigeria in June 2025.

Figure 2 shows the distribution of soil moisture conditions across Nigeria in June 2025. Most parts of the country had normal to above-normal (surplus) soil moisture levels. However, below-normal (deficit) soil moisture was observed in parts of Borno, Yobe, Katsina, Zamfara, Kano, Niger, Nasarawa, Kwara, and Oyo states, as well as the Federal Capital Territory (FCT).

Implications for pasture availability

In some northern states and parts of the central states, the surplus soil moisture will encourage early green-up of grasses and browse species, improving pasture availability for grazing livestock. However, in areas that still had normal to below-normal soil moisture, pasture regeneration will still be patchy and inadequate, which limits feed supply. This may compel animals to graze over larger areas.

Above-normal soil moisture in the southern states supports pasture growth, providing good-quality forage for cattle, goats, and sheep. However, prolonged wetness increases the risks of waterlogging in low-lying grazing fields and the incidence of foot rot and parasitic infestations in livestock.

3.0 Temperature Distribution Across Nigeria in June 2025

3.1 Maximum (Daytime) Temperature Distribution

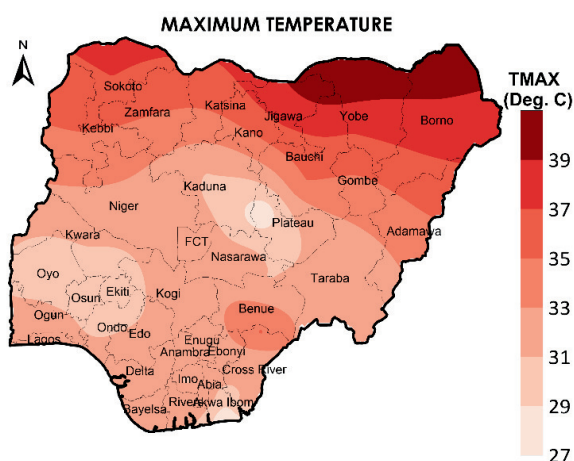


Figure 3: Maximum Temperature Distribution Across Nigeria in June 2025.

As shown in Figure 3, daytime temperatures across the country decreased slightly in June 2025.

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

Maximum temperatures range between 39°C and 40.8°C. These extreme values reflect the characteristics of the onset of the elevated rainy season temperatures in the semi-arid Sahel. Prolonged exposure to such high temperatures increases the risk of dehydration and mortality, especially in poultry and small ruminants.

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

Most areas in the north-central zone of the country recorded temperatures ranging from 33.0 °C to 37 °C. Plateau State was relatively cooler (27.5°C). Temperatures here in these parts are less extreme 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):

Temperatures recorded in these places were between 27°C and 33°C. The temperatures were lower compared to the north and central states, due to higher rainfall, cloud cover, and coastal influences. Eket (Akwa Ibom State) recorded the lowest temperature (27.1°C) in the region during the period. Cooler conditions in the south would help reduce heat stress, but combined with high humidity and rainfall, they can create an environment favourable for disease outbreaks (ticks, helminths, coccidiosis, and respiratory infections).

3.2: Minimum Temperature Distribution Across Nigeria in June 2025

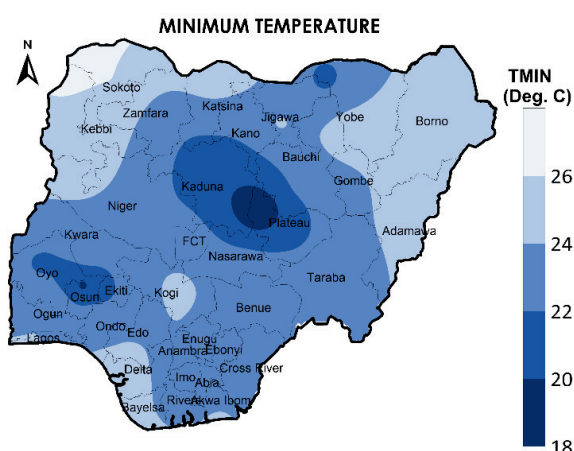


Figure 4: Minimum Temperature Across Nigeria in June 2025.

Figure 4 shows the minimum (nighttime) temperatures recorded across Nigeria in June 2025. During this period, minimum temperatures ranged from 18.1°C in Jos (Plateau State) to 26.0°C in Sokoto (Sokoto State). Nighttime temperatures were generally lower across Nigeria in June compared to May. 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 June 2025.

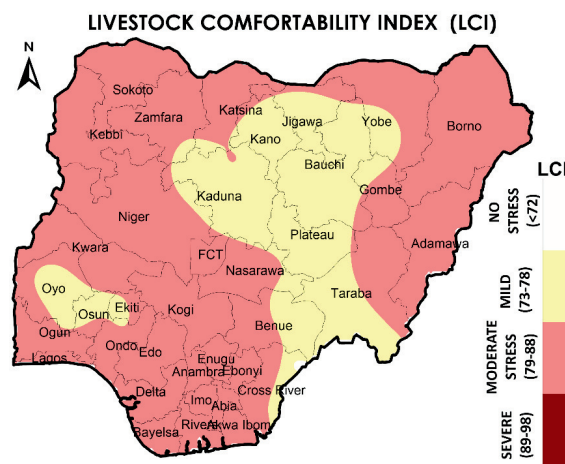


Figure 5: Livestock Comfortability Index Across Nigeria in June 2025.

Figure 5 shows the Livestock Comfortability Index (LCI) across Nigeria in June 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, moderate heat stress was observed across most parts of the northern and central states, while mild conditions prevailed in the central states of the country.

Implications for Livestock

- Animals usually experience increased respiratory rates and panting as mechanisms to dissipate excess body heat in hot weather.

- Reduced feed intake, leading to slower weight gain and reduced growth performance of livestock is common under heat stress conditions.
- Dairy cattle and beef cattle, and small ruminants: Decreased yield and lower butterfat content of milk, reduced carcass quality, and possible disruption of estrus expression, lower conception rates, and increased embryonic losses.
- Poultry: Reduced egg production, smaller egg size, and thinner shells, while broilers grow more slowly and have poorer feed conversion efficiency.
- Moderate heat stress increases water demand and predisposes animals to metabolic disorders and diseases by weakening immune response, further undermining livestock health and farm profitability.

4.0 Normalized Difference Vegetation Index (NDVI)

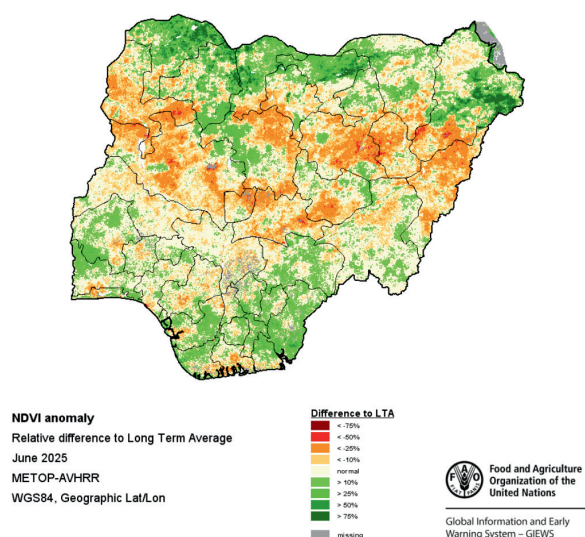


Figure 5: Normalized Difference Vegetation Index Across Nigeria in June 2025

The NDVI across Nigeria in June 2025 is shown in Figure 5.

Vegetation deficits (>25% below Long-Term Average (LTA)) dominated the Northcentral and parts of Northwest/Northeast, except parts of Borno, Sokoto, and Jigawa states, raising concerns about pasture availability in those areas. In contrast, the vegetation is favourable (>25% to 50% above LTA) for forage growth and indicating good vegetation in parts of Oyo, Ogun, Osun, Ondo, Ekiti, Lagos, Anambra, Imo, Enugu, Abia, Ebonyi, Rivers, Cross River, Akwa Ibom, Bayelsa, Edo, and Delta states. This improvement could be attributed to the sustained rainfall in the southern and parts of the northeastern states of the country.

5.0 Weather/Agricultural Outlook for July 2025

5.1 Weather Forecast July 2025

In June 2025, the Inter Tropical Discontinuity (ITD) is expected to pull northward and reach an average position of 20.1°N. Good moisture influx and velocity potential are expected to enhance the prospects of heavy rainfall across Nigeria.

5.1.1 Rainfall Forecast for May 2025

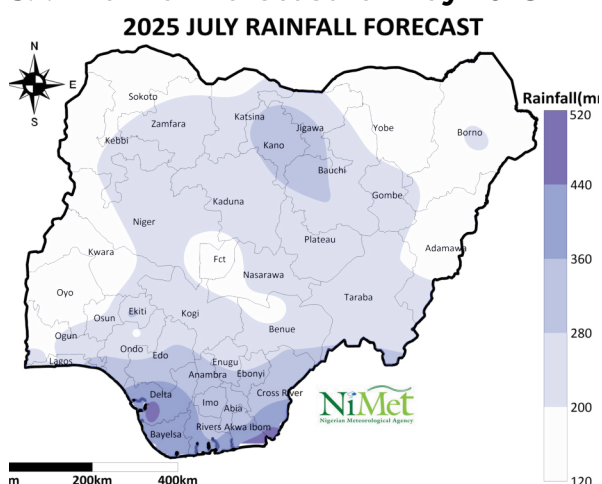


Figure 6: Rainfall Forecast for July 2025

(i) High Rainfall Amounts in the Southern States:

The forecast predicts 100mm to 500mm 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.

(ii) Moderate to High Rainfall in the Central States: The central states are forecast to receive 120 to 300mm of rainfall.

(iii) Moderate Rainfall in the Northern States: The northern states are expected to record 120 to 200mm of rainfall.

5.1.2 Implications of the Rainfall Forecast for Livestock:

- **Southern States (Coastal & Inland):**

- Increased moisture will support lush, rapid growth of grasses and forages, providing more abundant feed for grazing animals. However, heavy rains also pose risks of pond flooding (for aquaculture) and waterlogging in low-lying grazing areas, which increase the incidence of foot rot and parasitic infections.

- **Central States:**

- The expected weather conditions generally support pasture regeneration and surface water availability, creating favourable grazing conditions in the area. 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 recovery and replenishment of sources of water, easing pressure on livestock herders. However, localized dry spells may still limit forage growth in some areas, and competition for grazing resources could persist.

5.2 Temperature Forecast for June 2025

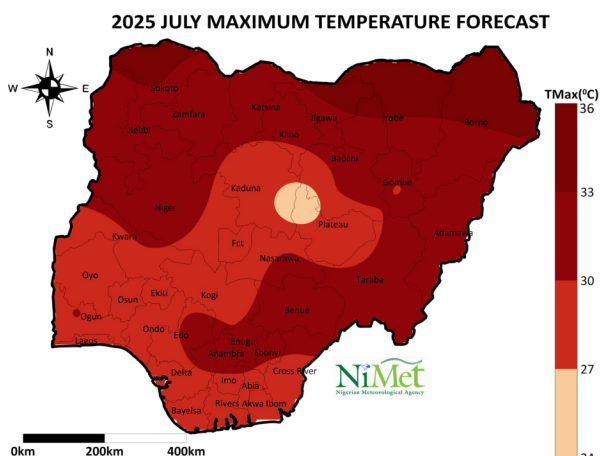


Figure 7: Maximum (Daytime) Temperature Forecast for July 2025

Figure 7 shows the maximum temperatures across Nigeria in July 2025. A maximum temperature range of 30 °C to 36°C is anticipated across Sokoto, Jigawa, Yobe, Nasarawa, Benue, Niger, Borno, Adamawa, Taraba, Gombe, Bauchi, Kano, Katsina, Zamfara, and Kebbi States.

A maximum temperature range of 27°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 25°C and 30°C.

5.2.1 Implications of the Forecast July 2025 Daytime Temperatures for Livestock.

(i) In the Northern States - High Temperatures (30°C to 36°C)

- Livestock may be exposed to moderate to severe heat stress, reducing feed intake, weight gain, fertility, and milk yield during the period.

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

- Animals in these places are likely to face mild heat stress.

(iii) In the Southern States - Lower Temperatures (27°C to 35 °C)

- Even though the temperatures are moderate, the level of humidity may increase the risk of parasite infestation and disease outbreaks

5.3 Minimum Temperature Forecast for July 2025

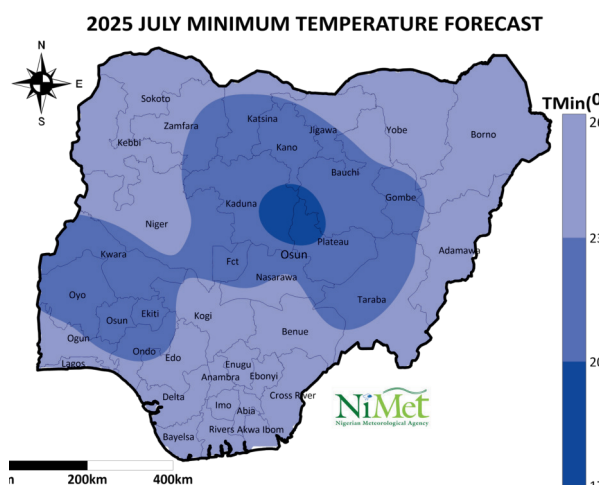


Figure 8: Minimum Temperature Forecast for July 2025

The forecast for the minimum (nighttime) temperatures across Nigeria for July is presented in Figure 8. Minimum temperatures between 17°C and 26 °C are expected across the country during the month.

5.3.1 Implications of the Forecast Nighttime Temperatures for Livestock

The predicted minimum temperatures are generally within the comfort range for most livestock, reducing heat stress and supporting recovery from daytime hot temperatures. However, in cooler areas such as Plateau State where nighttime temperatures were within the range of 17°C and 19°C, young animals and poultry may be vulnerable to respiratory tract infections, especially if housing is poorly ventilated or lacks adequate bedding.

5.4 Relative Humidity Forecast for June 2025

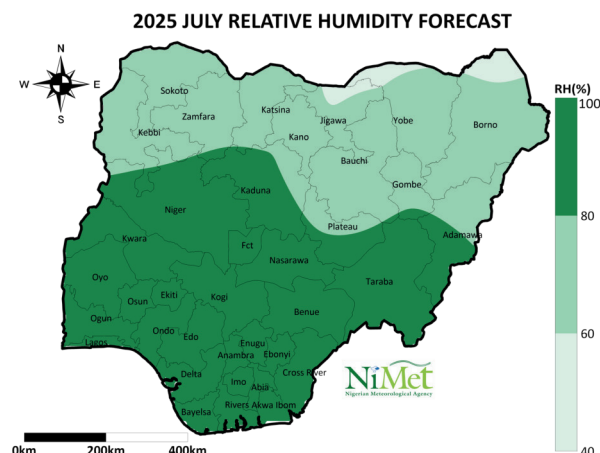


Figure 9: Relative Humidity Forecast for July 2025

5.4.1 Implications of July 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 reduce the concentration of dissolved oxygen in water. This could 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 may be conducive to parasite infestations and vector-borne diseases, necessitating preventive health measures.

5.5 Weather Advisory for Livestock Farmers in July 2025

This advisory provides breed-specific guidance to livestock farmers across Nigeria for July 2025, based on current 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, cool 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.
- Maintain regular 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 hours of the day - early morning and late evening.



Micro-livestock (Snails, Rabbits)

- Practice strict hygiene, regular disinfection, and biosecurity.
- The mild weather conditions in July 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.



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 livestock tomorrow. Be climate-smart.