



**NIGERIAN METEOROLOGICAL AGENCY**  
**33 POPE JOHN PAUL II STREET, MAITAMA DISTRICT,**  
**P.M.B. 615, GARKI, ABUJA, NIGERIA**

**Agrometeorological Bulletin No.25, Dekad 1, September (1 – 10) 2011**

**SUMMARY**

The 1st dekad of September witnessed moderate to heavy rains across the country. Most parts of the south and some parts of the north central had rainfall amounts exceeding 100mm. Surplus soil moisture conditions were observed in most parts of the country exception for few areas like Sokoto, Gusau, Katsina, Nguru, Potiskum, Maiduguri, Ilorin and Warri which had deficits. Most parts of the country had normal temperatures while warmer than normal temperatures have persisted along the extreme north (Sokoto, Katsina, Nguru, Potiskum, Maiduguri, Gusau and Kano). Areas in and around Jos, Shaki, Iseyin and Eket were colder than normal. Temperatures below 32 Deg C were recorded in most parts of the country while the extreme north had above 32 Deg C. Harvest of maize, cassava, fruity vegetables and new yams remained the dominant field activity during the dekad.

**1.0 RAINFALL TREND**

**1.1 Rainfall Anomaly**

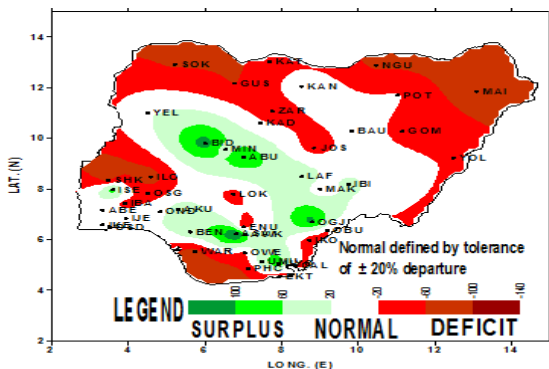


FIG. 1: 1st DEKAD OF SEPTEMBER 2011 RAINFALL ANOMALIES (%) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEAN S.

Fig 1 shows the rainfall anomaly over the country and indicates that deficit rainfall anomalies were recorded in parts of the extreme north, southsouth and southwest (red areas). However most parts of the country have normal to surplus anomalies.

**1.2 Rainfall Amounts**

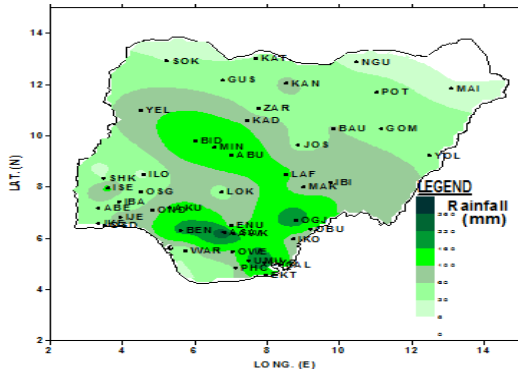


FIG. 2: ACTUAL RAINFALL AMOUNT FOR DEKAD 1, SEPTEMBER 2011

The actual rainfall received across the country is shown in Fig 2 and reveals that most parts of the country had over 30mm of rain except areas in and around Sokoto,

Katsina, Nguru, Maiduguri, Ilorin Shaki and Warri which had below 30mm. The highest rainfall amounts were recorded in Uyo, Ogoja and Asaba with 211.9mm, 221.3mm and 289.6mm respectively.

**1.3 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE DEKAD**

Figs 3A & B below are the comparison of the actual rainfall amount with normal rainfall values in some selected stations across the south and the north of the country. Both figures show that most stations in both the north and south had below normal rainfall.

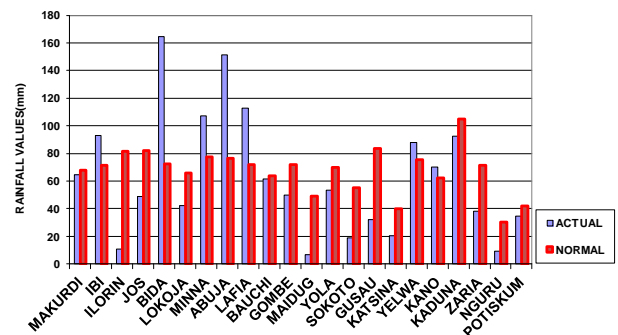


FIG. 3A: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 1, SEPT. 2011: FOR NORTHERN AND CENTRAL STATES OF NIGERIA

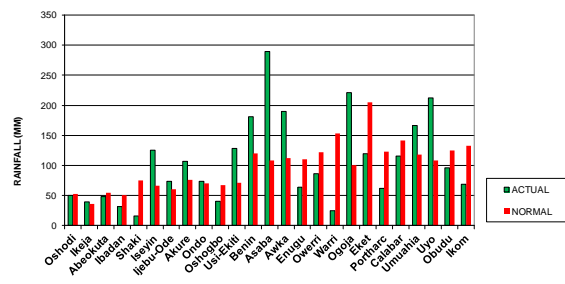


FIG. 3B: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 1, SEPT. 2011 : SOUTHERN STATES

### 1.4 Number of Rain Days

The number of rain days across the country is shown in **Fig 4** and reveals that most parts of the country had over 3-8 days of rainfall while the extreme north had less than 3 days of rain. The rainfall distribution was generally favourable for crop development and supported crops that required high spread of rains.

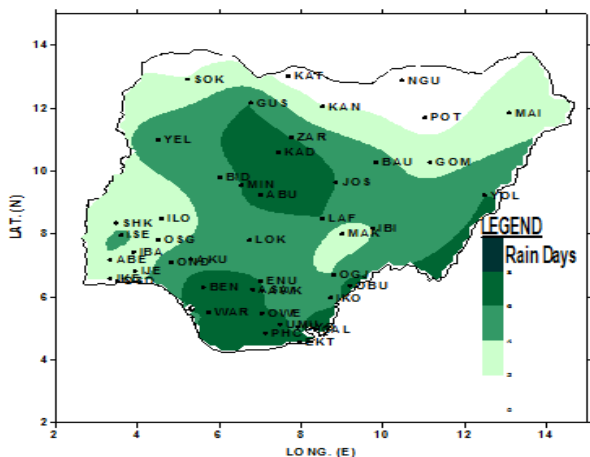


FIG. 4: A CTUAL NUMBER OF RAIN DAYS FOR DEKAD 1, SEPTEMBER 2011

## 2.0 SOIL MOISTURE CONDITION

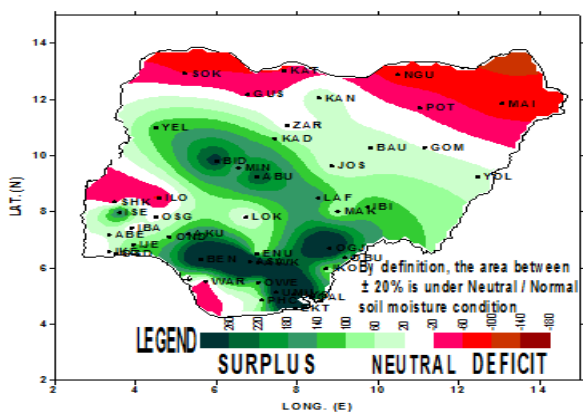


FIG. 5: 1st DEKAD OF SEPTEMBER 2011 SOIL MOISTURE INDICES (%) OVER THE COUNTRY.

The decadal distribution of soil moisture across the country is shown in **Fig 5** above and indicates that most parts of the country (green areas) had normal to surplus soil moisture conditions while areas in and around Sokoto, Gusau, Katsina, Nguru, Potiskum and Maiduguri recorded deficits. The soil moisture across the country generally supported crop growth and development and made harvesting of root crops easier.

## 3.0 MAXIMUM TEMPERATURE TREND

### 3.1 Maximum Temperature Anomaly

**Fig 6** below shows the trend of maximum temperature anomaly and indicates that most parts of the country were normal. However, Sokoto, Katsina, Nguru, Gusau, Potiskum and Maiduguri and were warmer than normal while areas in and around Jos, Shaki, Iseyin and Eket were colder.

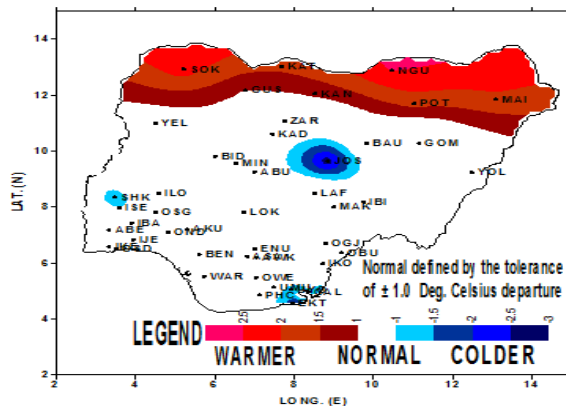


FIG. 6: 1st DEKAD OF SEPTEMBER 2011 MEAN MAXIMUM TEMPERATURE ANOMALIES (Deg. C) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

### 3.2 Maximum Temperature Values

The actual mean maximum temperature distribution is shown in **Fig 7** below and reveals that most stations across the country recorded temperatures below **32 Deg C** while areas in and around Sokoto, Katsina, Nguru, Potiskum, and Maiduguri recorded temperatures above **32 Deg C**. Temperatures generally favoured crop development and growth and as well as livestock performance.

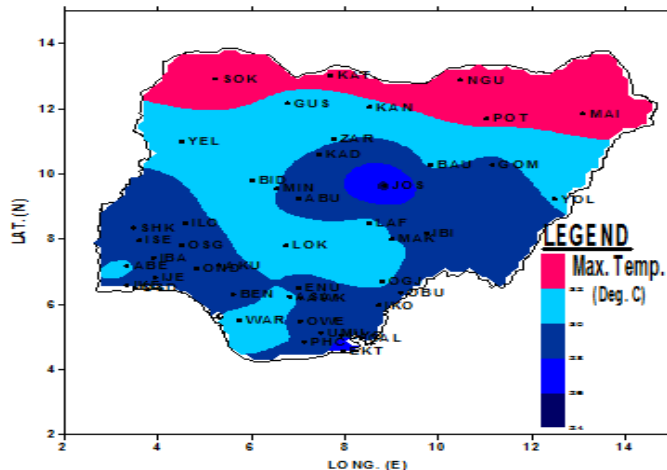


FIG. 7: MEAN MAXIMUM TEMPERATURE FOR DEKAD 1, SEPTEMBER 2011

## 4.0 WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 2 (11 TO 20), OF SEPTEMBER 2011

### 4.1 Weather Outlook

The moist south westerly winds are expected to continue to dominate the country. The Inter Tropical Discontinuity (ITD) is expected to continue its southward movement fluctuating between Latitude **18.0**

*deg. and 20.0 deg. north.* This is expected to lead to more convective activities across the country.

The extreme north and central states are expected to experience cloudy weather conditions with rain showers and thundery activities.

The inland and the coastal areas of the south are expected to be cloudy with widespread rainfall activities.

Maximum temperatures for the north and central states are expected to range between  $27^{\circ}\text{C}$  and  $33^{\circ}\text{C}$  while the minimum temperatures will be between  $21^{\circ}\text{C}$  and  $24^{\circ}\text{C}$ .

Maximum temperatures for inland and coastal areas are expected to range between  $25^{\circ}\text{C}$  and  $27^{\circ}\text{C}$  while the minimum temperatures will be from  $21^{\circ}\text{C}$  to  $24^{\circ}\text{C}$ .

Rainfall is expected to spread across the country with values ranging from 20mm to 150 in the north and central areas while the south is expected to have between 50mm to 300mm

#### 4.2 Agricultural Activity/Outlook

Harvesting of maize and fruity vegetables was in progress in parts of the south and north central.

It is expected that in parts of the south and north central, harvest of maize, cassava, vegetables and new yam will continue while the maturing of cereal crops such as millet, sorghum and maize will continue in the north.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATION	RAIN FALL (mm)	RAIN DAY (no.)	PET (mm)	TMAX (oC)	TMIN (oC)	DD (no.)	RAD (MJ/m <sup>2</sup> /day)
ABEOK	48.4	4	39.3	30.4	23.5	189.4	16.5
ABUJA	151.3	7	40.5	29.2	21.4	172.7	17.5
AKURE	106.7	5	39.9	29.5	22.1	178	17.1
ASABA	289.6	7	39.6	30.4	23.3	188.2	16.6
AWKA	189.9	6	39	29.8	23.0	183.9	16.5
BAUCHI	61.4	5	43.5	30.3	21.5	179.1	18.6
BENIN	181.5	7	36.1	29.0	22.9	179.5	15.4
BIDA	164.7	5	40.9	30.6	23.0	187.8	17.2
CALABAR	115.7	8	31.9	28.3	23.4	178.3	13.6
EKET	119.7	7	25.7	27.2	24.1	176.1	11.1
ENUGU	63.4	6	39.4	29.4	22.1	177.8	16.9
GOMBE	49.9	3	42	29.4	20.9	171.6	18.2
GUSAU	32	6	44.7	31.5	22.5	189.9	18.7
IBADAN	31.2	3	38.3	29.2	22.4	178.1	16.4
IJEBU	73.8	3	35.8	28.7	22.7	176.8	15.3
IKEJA	39.4	3	36.7	29.7	23.6	186.5	15.5
IKOM	68.9	5	38.4	29.0	22.2	176.2	16.5
ILORIN	10.6	3	40.8	29.7	22.0	178.4	17.5
ISEYIN	125.5	5	38.2	28.3	21.3	168.1	16.7
JOS	48.9	6	39.6	25.4	16.7	130.7	18.5
KADUNA	92.4	8	45.1	29.8	20.0	169.2	19.6
KANO	70.1	2	46.3	31.7	21.9	187.9	19.5
KATSINA	20.3	1	51.4	32.5	20.2	183.4	21.8

LAFIA	112.6	6	41.3	30.6	22.8	186.8	17.4
LOKOJA	42.1	4	42	31.2	23.5	193.4	17.5
MAIDU	6.9	3	46.8	32.9	23.3	200.8	19.2
MAKURDI	64.6	3	42.6	30.0	21.5	177.7	18.2
MINNA	107.4	6	45.2	30.1	20.4	172.4	19.5
NGURU	9.4	1	49	33.9	23.6	207.8	19.9
OGOJA	221.3	4	40.5	30.5	23.1	188	17
ONDO	73.9	5	37.7	29.1	22.5	178.1	16.1
OSHO DI	50.4	4	33.9	29.2	24.1	186.4	14.3
OSOGBO	40.6	3	37.9	28.8	22.1	174.6	16.3
OWERRI	86.5	6	39.1	29.6	22.6	180.7	16.7
PHC	61.4	7	38.3	29.9	23.3	186	16.2
POT	34.8	1	47.3	32.6	22.7	196.4	19.6
SHAKI	16.2	2	38.2	28.0	20.8	164.2	16.8
SOKOTO	19.1	2	49	33.5	23.0	202.7	20.1
UMUASHIA	166.1	7	36.7	29.0	22.8	179	15.7
UYO	211.9	5	32.2	28.1	23.2	176.6	13.8
WARRI	24.9	6	39.6	30.7	23.9	193.1	16.5
YELWA	87.7	5	40.9	30.7	23.0	188.6	17.2
YOLA	53.6	6	39.1	30.1	23.0	185.5	16.4
ZARIA	38	6	44.7	30.2	20.8	175	19.2
OBUDU	95.7	7	38.5	28.6	21.5	170.8	167.1
IBI	92.9	4	41.4	29.9	21.7	177.9	17.7
USI-EKITI	128.1	5					

Dear All,

Comments and suggestions on how to improve this publication are welcome. Agrometeorologists, Agriculturists, Extension Workers, Research Officers, Users and the General Public should kindly send feedback to:

The Director-General/CEO,  
Nigerian Meteorological Agency (NIMET),  
33 Pope John Paul II Street, Maitama District,  
PMB 615 Garki, Abuja.

E-mail: [nimetagrometbulletin@yahoo.com](mailto:nimetagrometbulletin@yahoo.com); NIMET WEB SITE: [www.nimetng.org](http://www.nimetng.org)