

## Agrometeorological Bulletin No.29, Dekad 2, October (11 –20) 2014 ISSN: 2315-9790

### SUMMARY

Gusau, Kano, Katsina, Yelwa and Zaria recorded zero rainfall, an indication of end of rainy season over the extreme North. The Inter Tropical Discontinuity (ITD)'s position oscillated between Latitudes 11.5 and 12.5°N. As expected, there was a general reduction in rainfall recorded across the North, however, Ilorin and Abuja stations recorded significant amount of rainfall of 123.5mm and 87mm respectively. The highest rainfall amount was recorded over Uyo with 500.5mm in 9 rain-days and that was followed by Eket with 274.4mm in 9 rain-days. The country witnessed increased maximum temperatures with the highest value of 36.1°C as recorded over Katsina while Jos had the lowest value of 27.3°C. Harvest of new yams, cassava, sweet potatoes, millet, groundnut, fresh vegetables and corn/maize remained major agricultural activity across the country. The northern farmers had begun the preparation for dry-season farming following the cessation of rains at the extreme North.

### 1.0 RAINFALL PATTERN

#### 1.1 Rainfall Anomaly (Deficit / Surplus)

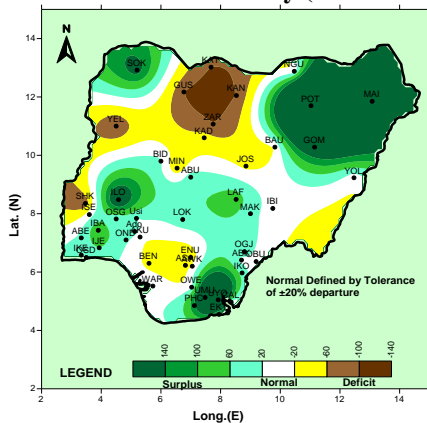


Fig.1: 2<sup>ND</sup> DEKAD OCT, RAINFALL ANOMALIES

Fig. 1 above shows the rainfall anomaly over the country and reveals that greater parts of the country had normal to surplus rainfall anomalies. Few stations like Katsina, Gusau, Kano, Zaria, Yelwa and Shaki recorded extreme deficit rainfall anomalies when compared with the normal (1981-2010).

#### Rainfall Amounts

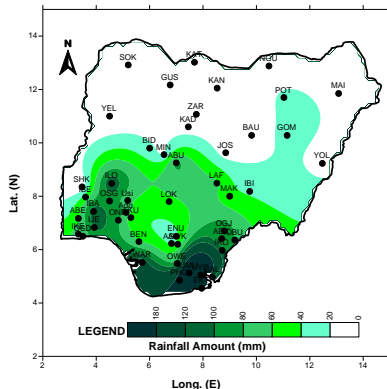
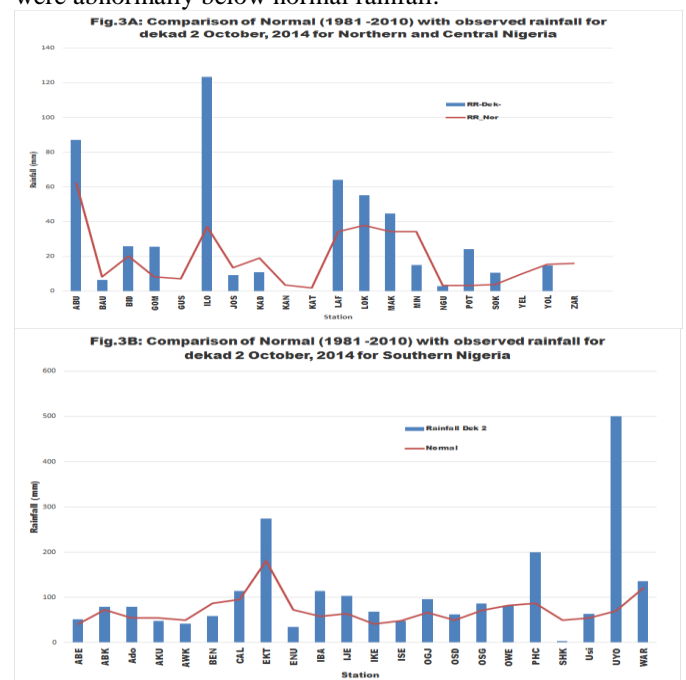


Fig.2 above depicts the actual observed rainfall amounts measured over the country for the 2<sup>nd</sup> dekad and reveals a general reduction in rainfall activity in the North. However, Ilorin station continued to witness surplus rainfall. The South reported improved rainfall amounts during the dekad such that a very high amount of 505.5mm was recorded in Uyo in 9 rain-days. Other

significant amounts were 274.4mm and 199.4mm as recorded over Eket in 9 rain-days and Port-Harcourt in 6 rain-days respectively. Gusau, Katsina, Kano, Yelwa and Zaria did not record rainfall during the dekad. The excess moisture favoured the growing crops in the field but caused matured tuber crops like yam, cassava, etc. to rot and therefore farmers were advised to harvest them for processing and marketing.

#### 1.2 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE 2<sup>ND</sup> DEKAD OF OCTOBER

The comparison of the actual rainfall amounts measured and normal/long term averages during the dekad over the northern and southern parts of the country is shown in Fig.3A and Fig.3B above respectively. The Fig.3A (North) indicates that most stations recorded normal to above normal rainfall except, Gusau, Katsina, Kano, Yelwa and Zaria that recorded below-normal rainfall. Fig.3B (South) shows that most stations recorded normal to above normal rainfall except Enugu and Shaki that were abnormally below normal rainfall.



### 1.3 Number of Rain Days.

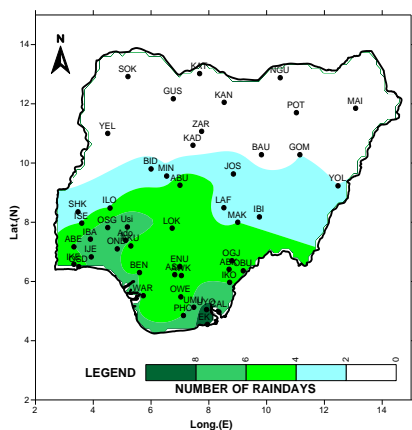


Fig.4: NUMBER OF RAIN DAYS

The rainfall distribution across the country is shown in Fig. 4 above and reveals a reduction in the number of rain-days in the North that recorded between 0 and 2 rain-days except places like Abuja, Bida, Lokoja, Ilorin, Makurdi and Jos that had more than 2 rain-days. The Southern part of the country recorded 4 to 9 rain-days. The number of rain-days determines the spread of rains that helps farmers in farming operations for better cultural practices and other activities.

### 2.0 SOIL MOISTURE CONDITION

The soil moisture indices across the country for the dekad are shown in Fig. 5 below and the figure indicates that the Southern part of the country had adequate soil moisture (normal to surplus soil moisture indices) while the North had deficit soil moisture indices. Some parts of the North witnessed cessation of rains hence drier soil moisture over the northern country.

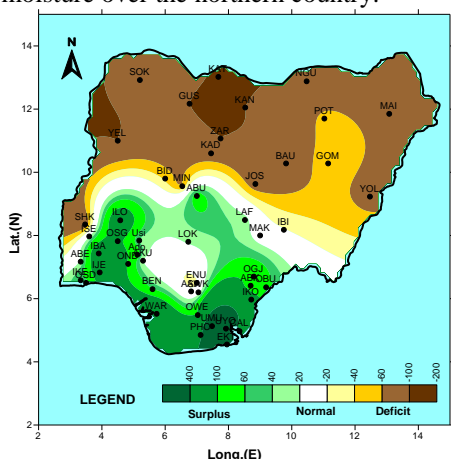


Fig.5: 2<sup>ND</sup> DEKAD OF OCTOBER SOIL MOISTURE INDEX (SMI)

### 3.0 MAXIMUM TEMPERATURE TREND

#### 3.1 Maximum Temperature Anomaly

Most parts of the country showed normal to colder-than-normal maximum temperature anomaly as shown in Fig.6 of maximum temperature anomaly while stations like Katsina, Shaki, Abakaliki and Port-Harcourt recorded warmer than normal temperature anomaly.

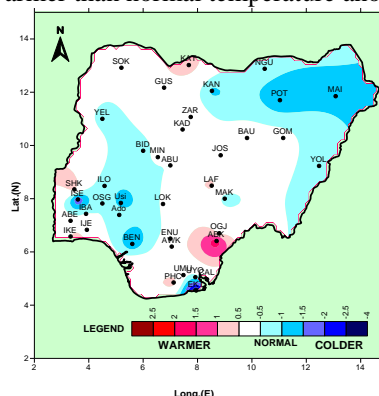


Fig.6: Maximum Temperature Anomaly.

#### 3.2 Maximum Temperature Values.

Fig.7 below shows actual mean maximum temperature distribution across the country and indicates that most parts of the country had mean maximum temperatures of 30°C and above except Jos, Eket, Iseyin, Oshogbo, Ondo, Benin and Ekiti that had below. The extreme North had mean maximum temperatures of above 34°C. Katsina and Jos stations recorded the highest and lowest temperatures of 36.1°C and 27.3°C respectively.

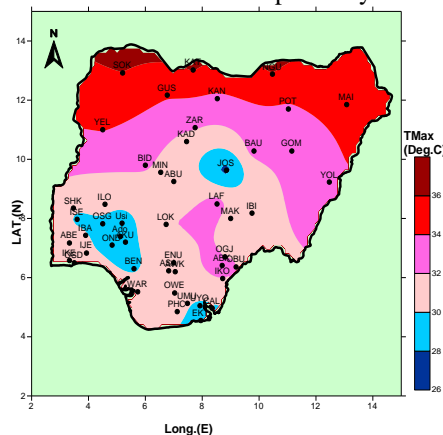


Fig. 7: Mean maximum Temperature

### WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 3 (21 TO 31), OF OCTOBER, 2014

#### 4.1 Weather Outlook

The Inter Tropical Discontinuity (ITD)'s position will fluctuate between latitudes 10deg. N and 12degN. The northern part of the country is expected to be partly cloudy and sunny with localized rains. The central states are expected to be partly cloudy to cloudy with occasional rains/thunderstorms. The inland and coastal areas of the South are expected to witness cloudy weather conditions with rains/showers and localized thunderstorms.

The mean maximum temperatures between  $30^{\circ}\text{C}$  and  $36^{\circ}\text{C}$  are likely to be experienced over the northern and the central states except Jos and environs that are expected fall below while the mean minimum temperatures will range from  $20^{\circ}\text{C}$  to  $23^{\circ}\text{C}$ . The inland and coastal areas of the South are expected to experience mean maximum temperatures of  $29^{\circ}\text{C}$  -  $33^{\circ}\text{C}$  with the mean minimum temperatures of  $20^{\circ}\text{C}$  -  $24^{\circ}\text{C}$ .

#### 4.2 Agricultural Activity/Outlook

Agricultural activities in the South and the central states were harvesting of new yam, sweet potatoes, fresh corn and fresh vegetables while those of the North included the preparation of nurseries for tomatoes and other vegetables and harvesting of fresh maize, sweet potatoes, millet, sorghum, vegetables like carrots, cabbage, groundnut. These activities are expected to continue in the next dekad. It is important that farmers are reminded of the usefulness of NiMet's weather information to improved agricultural-value-chain and family farming. Let us be weather-wise.

**TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD**

STATION	RAINFALL	RAINDAY	PET	TMAX	TMIN	GDD	RAD
ABEOKUTA	52.1	6	44.2	31.7	23.4	195.2	18.3
ABUJA	87	6	47.4	30.8	20.6	176.7	20.3
ABAK	79.1	5	48.7	32.9	23	199.7	20
AKURE	47.9	4	41.7	29.6	21.7	176.8	17.8
AWKA	41.5	6	43.8	31.7	23.6	196.2	18.2
BAUCHI	6.5	1	50.1	32.8	22	193.8	20.9
BENIN	59.1	6	37.4	29.7	23.5	186.2	15.7
BIDA	25.9	3	45.7	32.3	23.5	199.2	18.8
CALABAR	114.7	8	41.3	29.7	23.5	186.2	15.7
EKET	274.4	9	39.8	27.8	20.1	159.2	17.7
ENUGU	35.1	4	46.7	30.8	21	178.9	20
GOMBE	25.7	2	48.7	32.6	22.4	194.8	20.2
GUSAU	0	0	52.8	34.2	22.5	202.8	21.6
IBADAN	114.5	7	43.4	30.1	21.5	177.9	18.6
IJEBU	103.7	7	42.3	30.3	22.4	183.4	17.9
IKEJA	68.7	4	42.3	30.8	23.1	189.4	17.7
ILORIN	123.5	4	45.1	30.6	21.5	180.8	19.2
ISEYIN	47.7	4	42.5	29.6	21.4	175	18.3
JOS	9.3	4	45.7	27.3	16.1	137	21.2
KADUNA	10.9	1	47.9	31.4	21	181.9	20.4
KANO	0	0	54.6	33.6	20.3	189.4	22.9
KATSINA	0	0	58.9	36.1	21.6	208.3	23.9
LAFIA	64.2	3	48.9	33	23	199.7	20.2
LOKOJA	55.2	6	44.6	32	23.6	197.7	18.4
MAKURDI	44.7	4	44.3	31.1	22.6	188.4	18.6
MINNA	15.1	2	45.2	31.5	22.6	190.3	18.9
NGURU	2.9	1	57.9	36	21.8	208.7	23.4
OGOJA	96.6	5	45.8	31.9	23	194.5	19
OSHODI	62.7	5	44.4	31.7	23.4	195.7	18.4
OSOGBO	86.3	7	42.5	29.8	21.6	177.1	18.2
OWERRI	81.2	4	42	30.5	22.9	186.9	17.6
PHC	199.4	6	44.4	31.3	22.6	189.4	18.6
POT	24.3	1	52	33.7	22	198.8	21.5
SHAKI	3.8	3	44.6	30.6	21.8	182	19
SOKOTO	10.5	1	55.3	36	23.6	217.7	22.1
UYO	500.5	9	39	29.6	22.8	181.9	16.6
WARRI	135.5	6	41.9	31.3	23.9	195.9	17.3
YELWA	0	0	47.5	34.1	25.1	215.9	19
YOLA	14.7	2	49.2	33.8	23.9	208.5	20
ZARIA	0	0	49	32.2	21.5	188.1	20.6
ADO-EKITI	79.9	8	43	29.6	21.1	173.7	18.5
USI-EKITI	64.2	8	47.4	29.1	18.1	156.1	21.1

Note:

Rainfall (mm)

PET = Potential Evapotranspiration (mm/day)

TMAX = Maximum Temperature ( $^{\circ}\text{C}$ )

TMIN = Minimum Temperature ( $^{\circ}\text{C}$ )

GDD = Growing Degree Day (day)

RAD = Radiation ( $\text{MJ}/\text{m}^2/\text{day}$ )

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:

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