



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

Agrometeorological Bulletin No.12, Dekad 3, April (21 – 30) 2011

SUMMARY

The 3rd dekad of April 2011 witnessed deficit rainfall anomalies as recorded in some parts of the south with surpluses at Benin, Eket, Ikom and Ogoja stations. Rains were received across the south and some parts of the North Central with light to moderate intensity and occasional heavy thunderstorms in parts of Lagos and the north central including Kaduna and Makurdi that resulted to loss of lives and damage to property. The highest rainfall amount of 123.8mm in 5 days was recorded in Benin. Most parts of the southeast had surplus soil moisture condition while the north and some parts of the southwest recorded deficit. Warmer than normal temperatures were experienced along the extreme northern states including Sokoto, Gusau, Katsina, Kano, Nguru, Potiskum, Yola and Maiduguri. Stations at Jos, Akure and Eket were colder than normal temperatures. Temperatures below 32 deg C were recorded in and around Jos, Shaki, Eket, Port Harcourt and Calabar while other parts of the country had above 32 Deg C. However, temperatures of above 40 Deg C were reported at Maiduguri, Nguru and Sokoto. With appreciable rainfall in most parts of the north central in the past two decades, some farmers have continued to clear their farmlands for seed bed preparations while others began planting. Harvest of early maize and leafy vegetables planted earlier on irrigated farms across the country is in progress. Farmers in the north and the north central parts of the country are advised to consider 2011 NIMET's Seasonal Rainfall Prediction (SRP) for probable effective planting dates.

1.0 RAINFALL TREND

1.1 Rainfall Anomaly

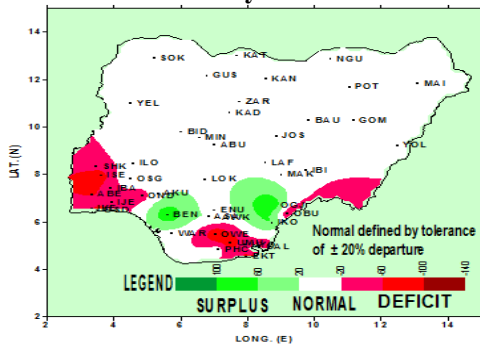


FIG. 1: 3rd DEKAD OF APRIL 2011 RAINFALL ANOMALIES (%) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

The rainfall anomaly during the dekad is shown in **Fig 1** above and indicates that most parts of the southwest and some parts of the southeast (red areas) had deficit rainfall anomalies while few areas also in the south (Benin, Eket, Ikom and Ogoja) recorded surpluses. Greater parts of the country (in white) remained normal.

1.2 Rainfall Amounts

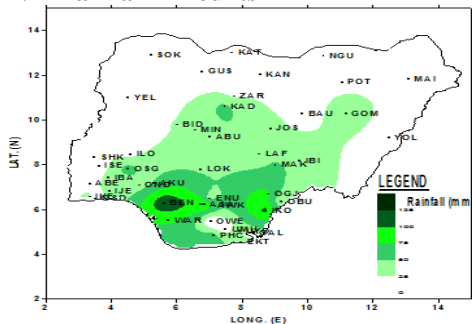


FIG. 2: ACTUAL RAINFALL AMOUNT FOR DEKAD 3, APRIL 2011

Fig 2 shows the rainfall amounts recorded across the country and reveals that **most parts of the south and some parts of the north central (in green)** received light to moderate rains with heavy thunderstorms in parts of Lagos and some parts of the north central including Kaduna and Makurdi that resulted to loss of lives and damage to property. Some parts of the southwest and the northern parts of the country (in white) recorded below 10mm of rainfall. Farmers especially those in the extreme north are advised to continue to irrigate their crops as rains are still inadequate.

1.3 COMPARISON OF NORMAL WITH ACTUAL RAINFALL FOR THE DEKAD

The comparison of the actual rainfall amount with normal rainfall values in some selected stations across the south and north is shown in **Figs 3a & b** below. **Fig 3a** shows that stations in the north which had rains were above normal while **fig 3b** shows that most stations in the south were below normal.

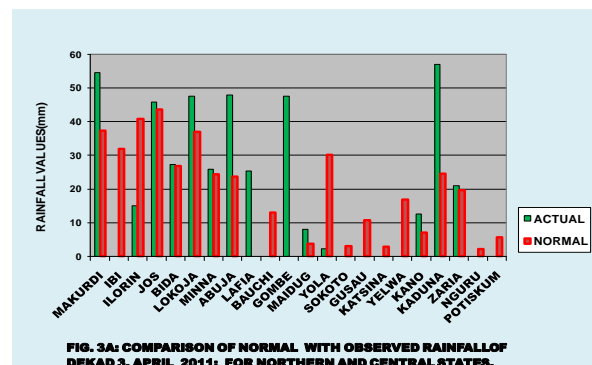


FIG. 3A: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 3, APRIL 2011: FOR NORTHERN AND CENTRAL STATES.

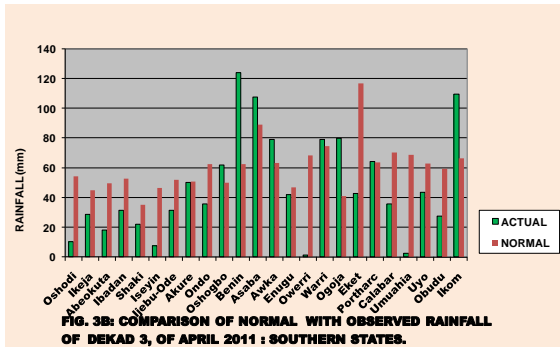


FIG. 3B: COMPARISON OF NORMAL WITH OBSERVED RAINFALL OF DEKAD 3, OF APRIL 2011 : SOUTHERN STATES.

1.4 Number of Rain Days

Fig 4 shows the number of rain days across the country and reveals that most stations in the south had 1- 4 raindays while Lokoja, Makurdi, Awka, Benin, Calabar and Eket had over 4days of rainfall. The distributions favoured field crops in these areas. The greater parts of the country (white) had zeros to 1 rain-day that were not adequate for crop growth and development.

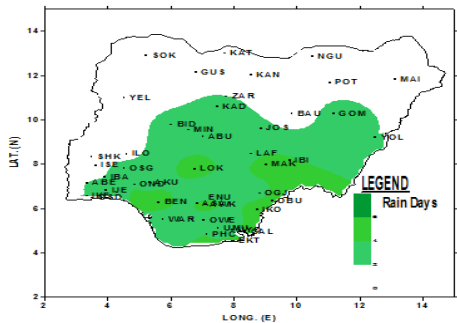


FIG. 4: ACTUAL NUMBER OF RAIN DAYS FOR DEKAD 3, APRIL 2011

2.0 SOIL MOISTURE CONDITION

Fig 5 shows the decadal distribution of soil moisture across the country and indicates that most parts of the southeast had surplus soil moisture condition while the north and parts of the southwest had deficit that impacted negatively to crop growth. The moisture condition in the southern parts of the country favoured crop growth and development.

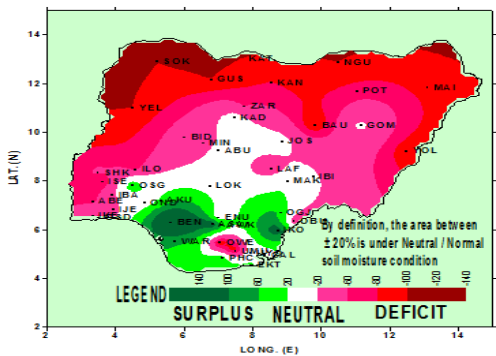


FIG. 5: 3rd DEKAD OF APRIL 2011 SOIL MOISTURE INDICES (%) OVER THE COUNTRY.

3.0 MAXIMUM TEMPERATURE TREND

3.1 Maximum Temperature Anomaly

The trend of maximum temperature anomaly over the country is shown in Fig 6 and indicates that warmer than normal temperatures were experienced along the extreme north (Sokoto, Gusau, Katsina, Kano, Nguru, Potiskum, Yola and Maiduguri) while Jos, Akure and Eket were colder than normal. The white areas were normal with no appreciable change as compared with the normal temperatures.

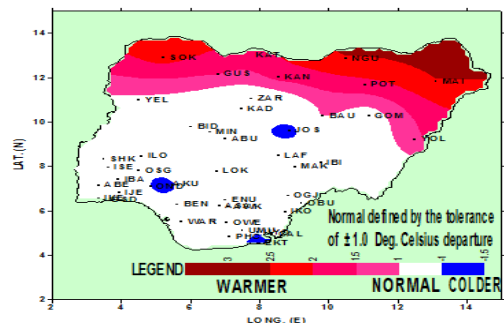


FIG. 6: 3rd DEKAD OF APRIL 2011 MEAN MAXIMUM TEMPERATURE ANOMALIES (Deg. C) OVER THE COUNTRY. ANOMALIES ARE COMPUTED WITH RESPECT TO THE 1971 - 2000 BASE PERIOD DECADEAL MEANS.

3.2 Maximum Temperature Values

Fig 7 below shows the actual mean maximum temperature distribution and reveals that parts of Jos, Akure, Ondo, Oshogbo, Benin, Uyo, Calabar and Eket recorded below than 32 Deg C while other parts of the country had above 32 Deg C. However, temperatures of above 40 Deg C were recorded at Maiduguri, Nguru and Sokoto which did not favour livestock comfort and crops that required optimum temperature for development.

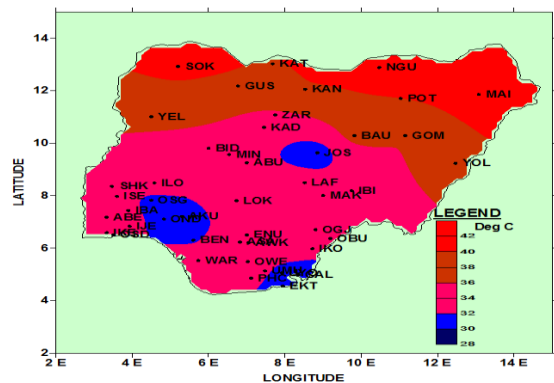


FIG 7. MEAN MAXIMUM TEMPERATURES(Deg C) FOR DEKAD 3, OF APRIL 2011

4.0 WEATHER/AGRICULTURAL OUTLOOK FOR DEKAD 1 (1 TO 10), OF MAY 2011

4.1 Weather Outlook

The position of Inter Tropical Discontinuity (ITD) is expected to fluctuate between Latitude 12.5 deg. north and 14.0 deg. north. Influxes of moist laden

south-westerly winds with intense convective activities are expected over the country.

The Northern part of the country will be expecting partly cloudy weather conditions, while central states will be cloudy with localized thundery activities.

The inland areas of the south will expect cloudy weather conditions with thunderstorms while the coastal areas are expected to witness rains and thundery activities during the period.

Maximum temperatures for the north and central states are expected to range between 35°C and 40°C , while minimum temperatures range between 25°C and 29°C . Maximum temperatures for inland and coastal areas will range from 29°C to

38°C while minimum temperatures will be between 25°C and 27°C during the period.

4.2 Agricultural Summary

In some parts of the south and north central, planting of the staple food crops have commenced. Harvest of early maize and leafy vegetables planted earlier on irrigated farms across the country is in progress.

In the extreme north, farmers are advised to continue to irrigate their farm crops while the central areas are requested to engage in clearing of farm lands and planting.

Farmers in the extreme north of the country are advised to consider 2011 NIMET's Seasonal Rainfall Prediction (SRP) for planting dates.

TABLE OF AGROMETEOROLOGICAL DATA FOR THE DEKAD UNDER REVIEW

STATIONS	TOTAL RAINFAL (mm)	TOTAL RAIN DAYS	EVAPOTRANSPIRATION (mm)	MEAN MAXIMUM TEMP ($^{\circ}\text{C}$)	MEAN MINIMUM TEMP ($^{\circ}\text{C}$)	DEGREE DAYS (MAIZE)	MEAN RADIATION ($\text{MJ}/\text{m}^2/\text{day}$)
ABEOKUTA	17.9	2	50.1	34.7	23.9	213.2	20.2
ABUJA	48	3	48.3	32.7	21.8	192.4	20.1
AKURE	50.1	3	40.8	30.7	22.8	187.1	17.1
ASABA	107.5	4	46.8	33.4	23.9	206.7	19
AWKA	78.9	6	44.4	32.8	24.1	204.4	18.1
BAUCHI	0	0	55.9	37.6	24.9	232.6	21.7
BENIN	123.8	5	41.4	31.7	23.9	198	17.1
BIDA	27.3	3	46.2	34.5	25.3	218.9	18.3
CALABAR	35.7	5	40.7	31.6	24.0	198.3	16.8
EKET	42.6	5	33.4	30.1	25.0	195.6	13.9
ENUGU	41.7	2	45.7	32.4	23.0	196.6	19
GOMBE	47.5	3	53.2	36.1	24.2	221.9	21.1
GUSAU	0	0	57.2	39.1	26.3	247.3	21.7
IBADAN	31.3	2	45.2	32.7	23.5	200.9	18.5
IJEBU ODE	31.2	3	44.7	32.9	24.0	204.7	18.3
IKEJA	28.6	2	44.6	33.6	25.1	213.8	17.9
IKOM	109.4	5	46.4	32.3	22.5	193.6	19.4
ILORIN	15.1	1	45.6	33.3	23.8	205.5	18.5
ISEYIN	7.6	1	46.7	32.7	22.7	197.3	19.3
JOS	45.9	3	46.2	29.7	18.6	161.2	20.4

KADUNA	57.1	3	57.1	33.7	22.4	200.5	20.5
KANO	12.5	1	60.5	39.6	25.1	243.8	23.1
KATSINA	0	0	61.1	39.6	24.6	241.2	23.5
LAFIA	25.3	3	47.1	34.2	24.8	215	18.8
LOKOJA	47.5	5	44.5	33.7	24.9	212.8	17.8
MAIDU	8	1	63.7	42.0	26.9	264.2	23.6
MAKURDI	54.6	5	45.9	33.0	23.7	203.5	18.8
MINNA	25.8	2	51.4	34.8	23.3	210.7	20.7
NGURU	0	0	67.1	42.0	24.5	252.5	25.3
OGOJA	79.8	3	50.7	34.4	23.4	209.1	20.5
ONDO	35.6	4	38.5	31.2	24.0	196.3	15.9
OSHODI	10.1	3	37.2	32.3	26.1	211.7	15
OSOGBO	61.8	3	42.7	31.5	22.8	191.9	17.8
OWERRI	1.2	2	45.4	32.7	23.6	201.9	18.6
PHC	64.2	4	45.5	33.1	24.1	286.4	18.5
POTISKUM	-	-	-	-	-	-	-
SHAKI	22	2	47.6	32.8	22.3	195.7	19.7
SOKOTO	0	0	58.9	41.2	28.3	267.4	21.7
UMUAHIA	2.5	2	43.4	32.4	24.1	202.3	17.8
UYO	43.4	2	40.5	31.4	24.0	197.2	16.8
WARRI	79.1	3	46.4	33.7	24.5	211.2	18.7
YELWA	0	0	47	37.0	27.8	244	17.9
YOLA	2.2	2	51.2	38.7	28.0	253.5	19.1
ZARIA	21	2	53.2	35.4	23.0	212	21.4
OBUDU	27.4	5	47.4	32.8	22.7	197.7	19.6

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; NIMET WEB SITE: www.nimetng.org