



## KENYA METEOROLOGICAL DEPARTMENT

### DEKADAL AGROMETEOROLOGICAL BULLETIN

#### WEATHER AND CROP REVIEW FOR DEKAD 31, 2011 01 – 10 NOVEMBER 2011

##### 1. RAINFALL AND TEMPERATURE HIGHLIGHTS

Compared to the previous dekad, there was an increase in rainfall activities countrywide with stations in all provinces reporting significant amounts of rainfall. The highest rainfall observed during the dekad, was 329.8 mm at Marsabit meteorological station while the lowest observed was nil at Garissa. The two meteorological stations are in the Eastern region of the country.

The second highest amount of rainfall reported in the entire country was 156.8mm at Kisii Met. in Nyanza province. Consequently, the highest rainfall amounts in the other Provinces, were 140.3mm at Eldoret Airport in the Rift Valley Province, 93.2mm at Moyale Met. station in North Eastern Province, 72.6mm at Voi in Coastal region and 72.6mm at Nyeri in Central Province. In Nairobi province, Dagoretti station located at the KMD headquarters recorded the highest rainfall amount of 71.2mm while finally in the Western province, Kakamega station reported the highest rainfall amount of 63.1mm.

Daytime (maximum) temperature generally increased over much of the country, apart from a few places, which had some reduction in temperature. The night-time (minimum) temperatures also increased over most parts of the country. For more comprehensive summary of rainfall and other meteorological parameters, see Figures 3.1 to 3.4 as shown below.

##### 2. CROP AND WEATHER REVIEW FOR DEKAD 31; 1<sup>ST</sup> TO 10<sup>TH</sup> NOVEMBER 2011

###### 2.1 NYANZA AND WESTERN PROVINCES

###### 2.1.1 Kakamega

This station recorded rainfall amount, mean air temperature and pan evaporation of 63.1mm, 20.9<sup>o</sup>c and 37.5mm respectively. In addition, sunshine hours reported were 4.2 hours per day.

*Maize and beans were at emergence and 75% flowering stages respectively and in moderate state. Normal yield is expected.*

### **2.1.2 Kisii**

The station recorded rainfall amount and mean air temperature of 156.8mm and 19.9<sup>0</sup>C respectively. Sunshine hours reported were 4.6hours per day. There was no report on pan evaporation.

*Maize was at 100% ninth leaf stage and in good state. Beans were at 95% flowering stage and in moderate state, though damage by black aphids were reported. Normal yield is expected.*

## **2.2 RIFT VALLEY PROVINCE**

### **2.2.1 Kitale**

The station recorded total rainfall, average air temperature and total pan evaporation of 78.4mm, 19.6<sup>0</sup>C and 29.4mm respectively. Sunshine hours reported was 4.7 hours per day.

*Harvesting of the maize crop, which was in fair state is ongoing.*

### **2.2.2 Eldoret-Kapsoya**

The station recorded rainfall, average air temperature and total pan evaporation of 91.2 mm, 17.7<sup>0</sup>c and 35.2mm respectively. The sunshine hours recorded was 5.2 hours per day.

*Maize was at harvesting stage and in good state though adversely affected by insufficient rainfall. However, normal yield is expected.*

## **2.3 CENTRAL AND NAIROBI PROVINCES**

### **2.3.1 Nyeri**

The station recorded rainfall, average air temperature and total pan evaporation of 72.6mm, 19.0<sup>0</sup>c and 41.1mm respectively. There was no report on Sunshine hours.

*Maize and beans are at 100% emergence stage and in good state. However, beans were suffering damage by spotted leafhoppers at 10%.*

### **2.3.2 Kabete**

The station recorded rainfall, average air temperature and total pan evaporation of 29.0mm, 19.5<sup>0</sup>c and 35.5mm respectively. Sunshine hours reported were 5.6 hours per day.

*Maize and beans were at emergence stage and in fair state. Coffee was at 30% ripeness stage and in moderate state but damaged by leaf rust, CBD and die back at 10% each. Bananas were at 100% appearance of suckers stage and in moderate state though damaged by thrips at 25% while cigar end rot at 10%.*

### **2.3.3 Thika**

The rainfall and mean air temperature recorded at the station was 54.4mm and 21.0<sup>0</sup>c respectively. There was no report on sunshine and evaporation parameters.

*Maize, beans and potatoes are at emergence stage and in fair state.*

### **2.3.4. Nyahururu**

The rainfall mean air temperature and total pan evaporation recorded at the station were 37.7mm, 15.3<sup>0</sup>c and 32.7mm respectively. Sunshine hours reported were 5.2 hours per day.

*Maize was at 47% full ripeness stage while potatoes at harvest. Both crops were in fair state with normal yield expected.*

### **2.3.5. Dagoretti**

The station recorded rainfall, average air temperature and pan evaporation of 71.2mm, 20.0<sup>0</sup>c and 37.4mm respectively. Sunshine hours reported were 5.9 hours per day.

*Maize and beans are at emergence stage and in fair state.*

## **2.4 EASTERN PROVINCE**

### **2.4.1 Meru**

The station reported rainfall, average air temperature total evaporation of 151.6mm, 18.9<sup>0</sup>c and 43.0mm respectively. The sunshine hours reported were 6.6 hours per day.

*Maize and beans were at emergence stage and in fair state.*

### **2.4.2 Embu**

The station recorded rainfall and average air temperature of 85.5mm and 20.3<sup>0</sup>c respectively. Sunshine hours reported were 7.2 hours per day. There was no report on evaporation.

*Maize and beans were at emergence stage and in fair state.*

### **2.4.3 Katumani (Machakos)**

The station reported rainfall and average air temperature of 51.0mm and 20.6<sup>0</sup>c respectively. There was no report on evaporation and sunshine parameters.

*Maize and beans were at emergence and planting is underway.*

## **2.5.0 COAST PROVINCE**

### **2.5.1. Msabaha**

The station recorded rainfall, average air temperature and pan evaporation of 70.4mm, 27.3<sup>0</sup>c and 37.9mm respectively. There was no sunshine report.

Mangoes (Ngowe type) were at 70% fruit setting stage and in good state. Maizewas at emergence and in fair state.

### 2.5.2 Mtwapa

The station recorded rainfall, average air temperature and pan evaporation of 26.1mm, 27.0<sup>o</sup>c and 54.6mm respectively. There was no sunshine report.

Mangoes (Apple) were at 100% fruit setting stage while maize was at emergence. Both crops were in fair state.

### 3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

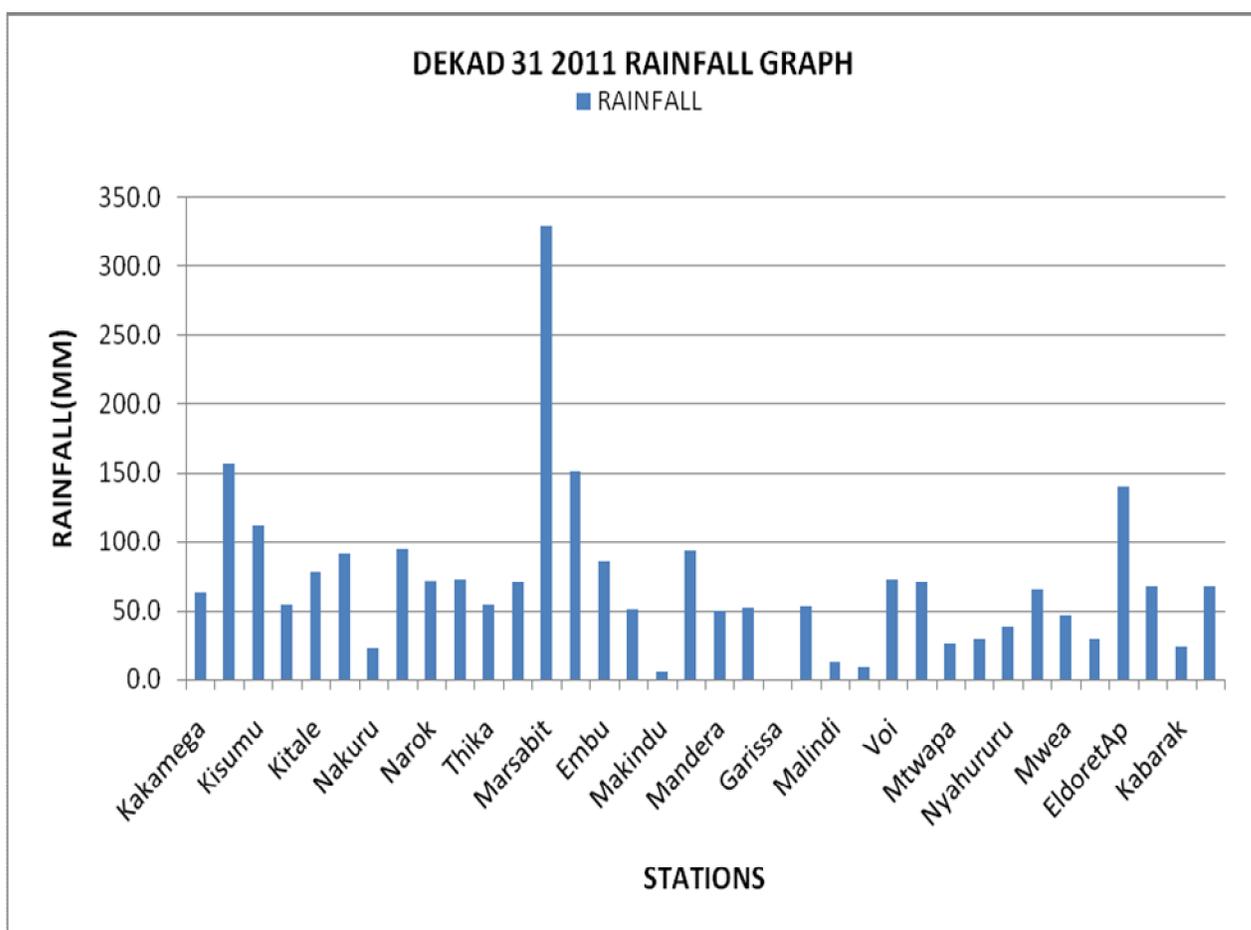


Figure 3.1: Actual Rainfall

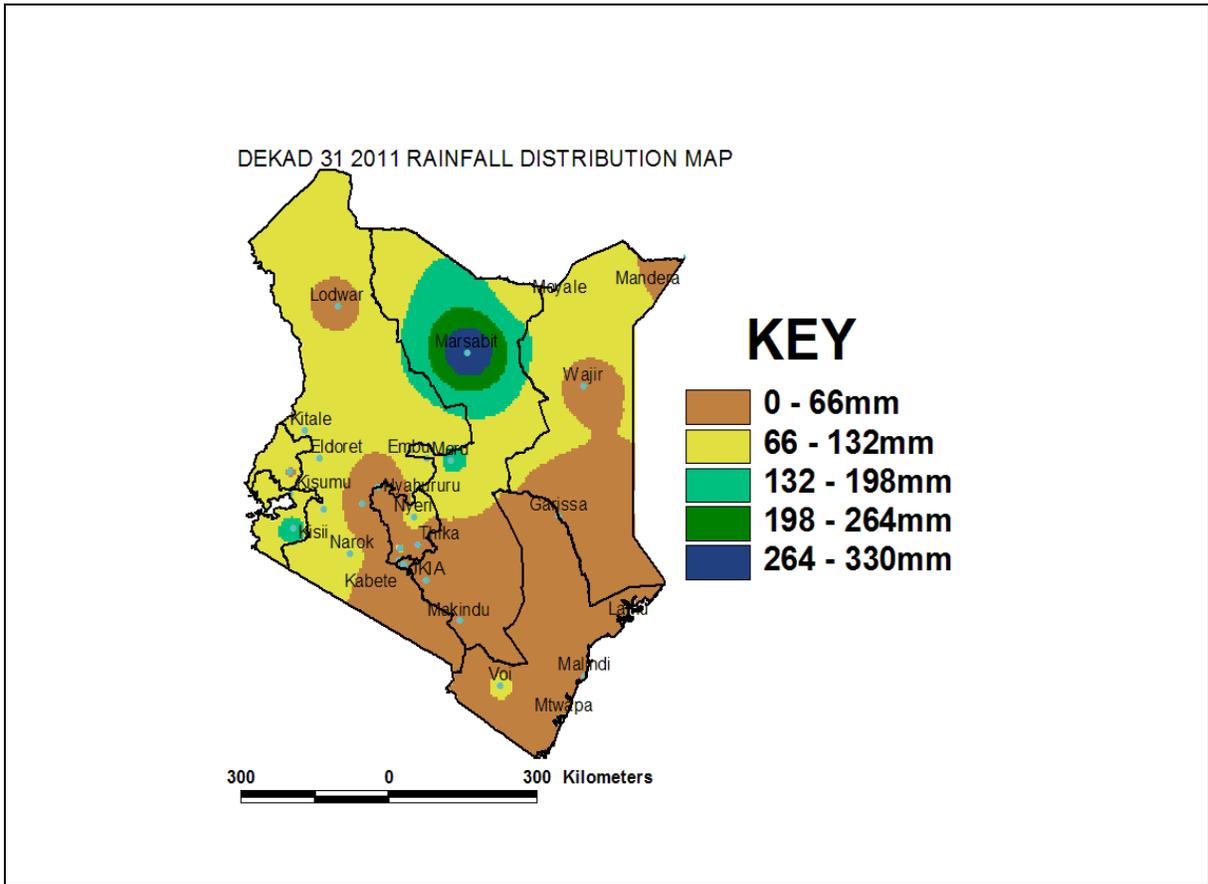


Figure 3.2: Rainfall distribution

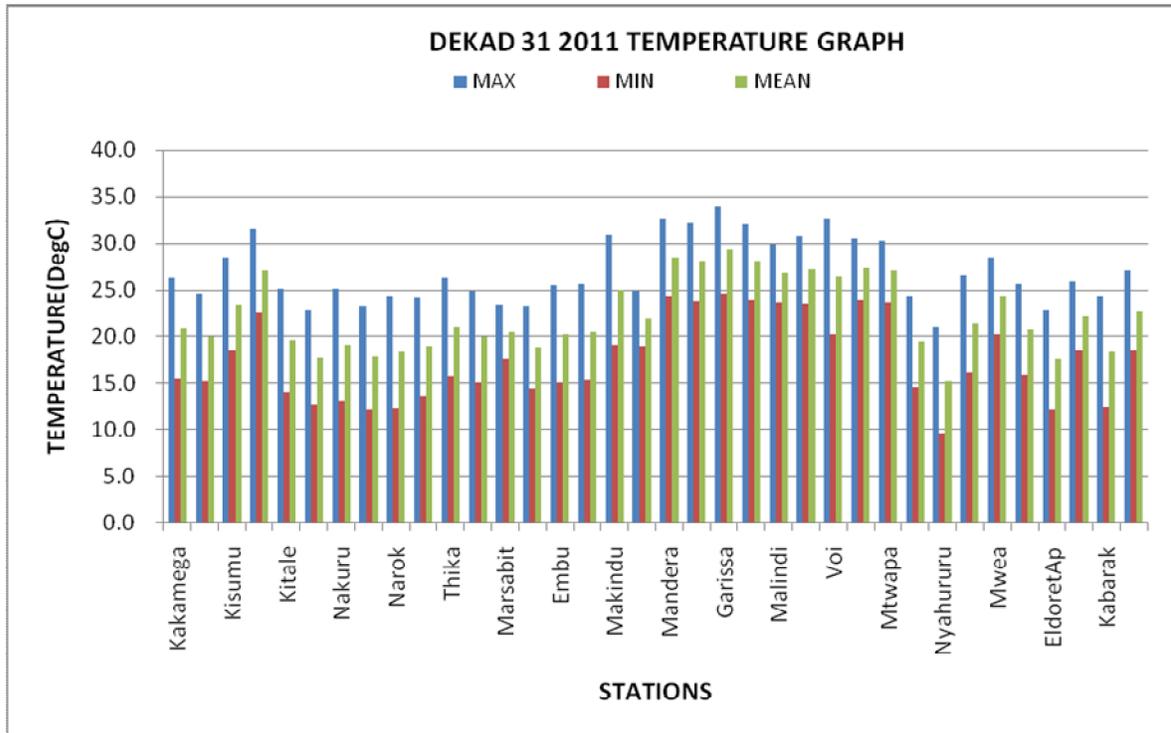


Figure 3.3 Temperature distribution

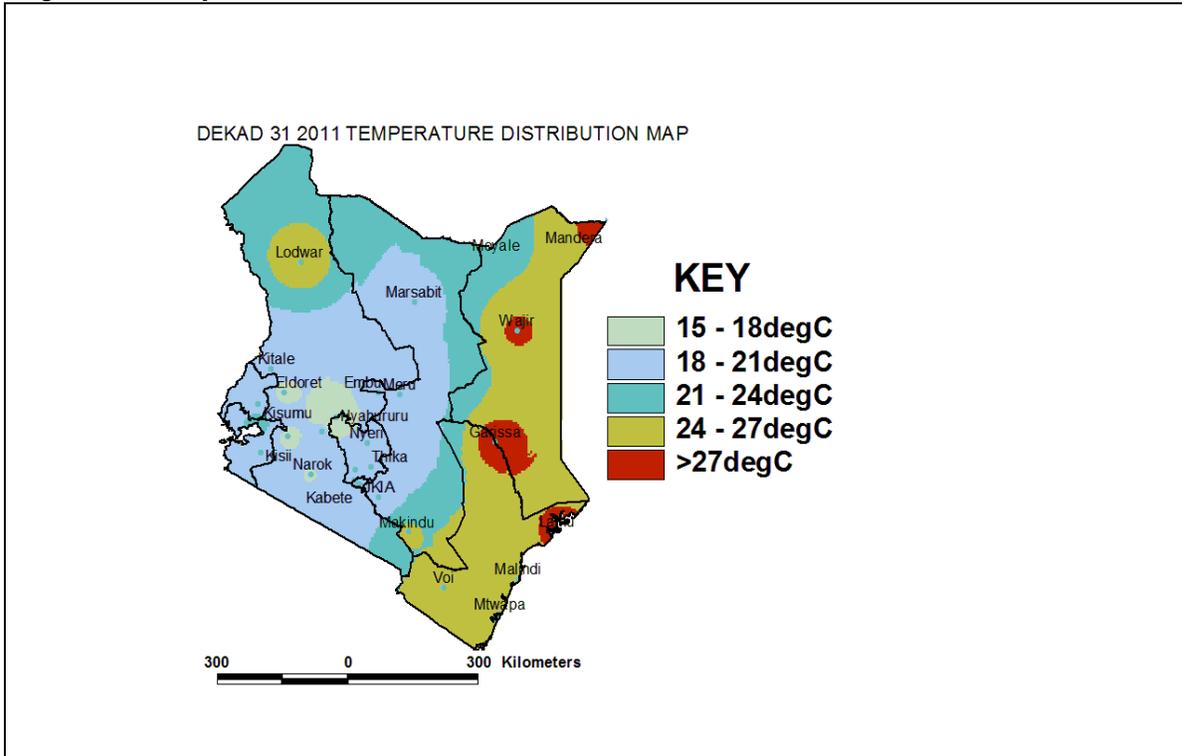


Figure 3.4: Mean Temperature distribution

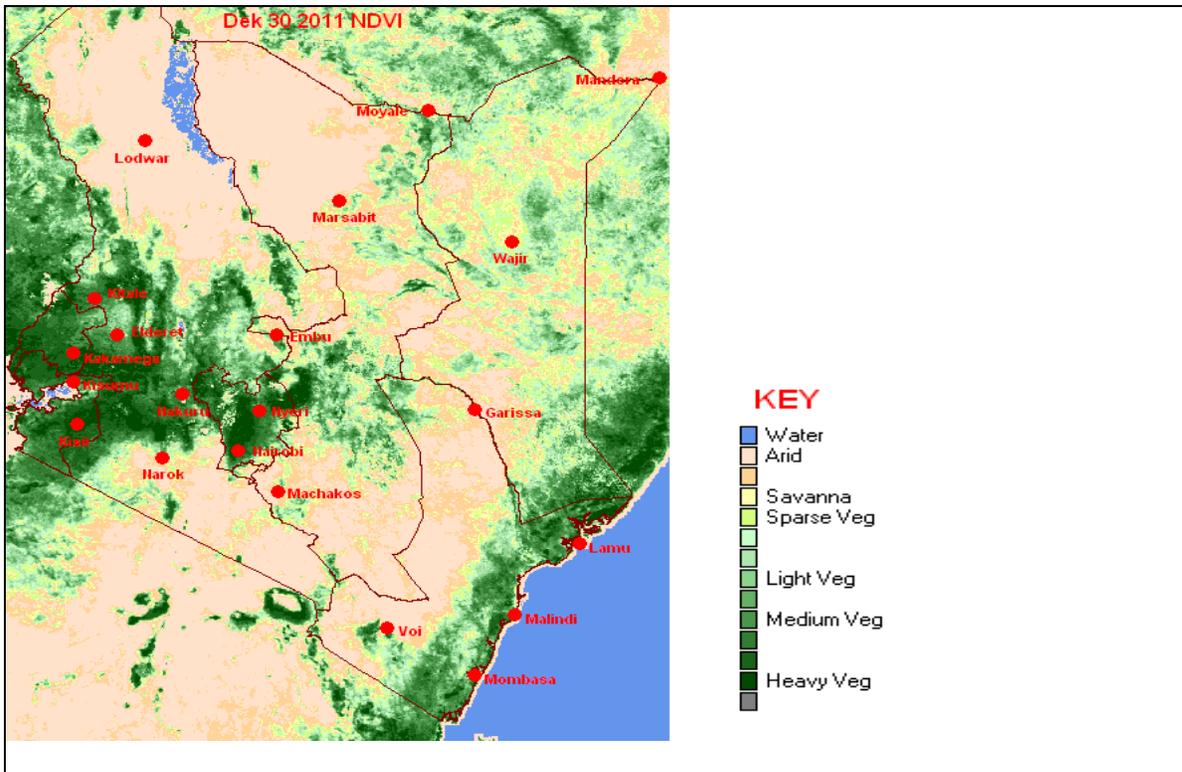


Figure 3.5: Normalized difference vegetation index (NDVI)

#### 4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 11<sup>TH</sup>- 20<sup>TH</sup> NOVEMBER 2011

- ✚ **Counties within the Lake Victoria Basin, Highlands west of the Rift Valley, Central and south Rift Valley (Kitale, Kakamega, Kisumu, Kisii, Migori, Nyamira, Kericho, Bomet, Uasin-Gishu, Nakuru, Narok, Nyandarua, etc)** will experience sunny intervals in the morning and afternoon showers accompanied by thunderstorms over several places at the beginning reducing to few places from the middle of the forecast period, and then increasing to several places again in the last two day of the forecast period.

*The forecast conditions will stimulate the growth and development of maize and beans in Kakamega and Kisii areas. However, the same conditions are likely to hamper the harvesting of maize that is going on in Kitale and Eldoret areas.*

- ✚ **The Northwestern counties (Turkana, West Pokot etc),** will experience sunny intervals in the morning and showers over several places in the afternoon occasionally reducing to few places especially in the middle of the forecast period.

*The expected conditions will continue to replenish and improve the vegetation, pasture and water resources in these areas. As a result, livestock will thrive thereby causing an increase in meat and milk products.*

- ✚ **The Central highlands including Nairobi area (counties of Meru, Murang'a, Kiambu, Nyeri, Nairobi, Embu etc)** will experience cloudy conditions accompanied by morning rains over several places and afternoon/night showers over several places at the beginning, changing to sunny intervals in the morning and afternoon showers over a few places from the middle of the forecast period.

*The forecast conditions are favorable for the growth and development of the subsistence crops i.e. maize, beans and potatoes being grown in these area and also the cash crops i.e. coffee and tea.*

- ✚ **Northeastern counties (counties of Marsabit, Mandera, Wajir, Garissa, etc),** will mainly experience light morning rains and afternoon showers and thunderstorms over several places. The rainfall is expected to be heavier in the central parts of the region.

*These will continue benefiting a few crops grown and livestock kept in this region.*

- ✚ **Southeastern lowlands (counties of Taita Taveta, Makueni, Machakos, Kitui, Mwingi, etc)** will experience mainly sunny intervals accompanied by occasional afternoon showers over few places during much of the forecast period relatively heavier and widespread rainfall is expected on the second last day of the forecast period.

*The forecast weather conditions will continue enhance the growth of maize and beans currently at emergence stage as they develop to the next phenological phase.*

- ✚ **The Coastal strip (counties Mombasa, Malindi, Kilifi, Lamu, Kwale, etc)** will experience morning showers over several places for much of the forecast period.

*The morning showers expected will provide the moisture necessary to stimulate the*

*growth of the perennial crops such as mangoes and maize crop planted for the current growing season.*

***For feedback or further guidance, Contact:***

Director,  
Kenya Meteorological Department,  
Agro meteorological Advisory Services Division,  
Dagoretti Corner, Ngong Road, P.O. Box 30259, 00100 GPO, Nairobi  
Tel: +254 (0)20 3867880-7/3876957/3873682 ; Fax: +254 (0)20 3876955  
E-mail: [agromet@meteo.go.ke](mailto:agromet@meteo.go.ke);  
Website: [www.meteo.go.ke](http://www.meteo.go.ke)

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