



# MONTHLY AGRO-METEOROLOGICAL BULLETIN

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## IN THIS ISSUE

- Pg.1 February's Weather Summary  
El Niño Alert
- Pg.2 Farming Community Report
- Pg.3 Seasonal Outlook
- Pg.4 Farming Outlook

## OVERVIEW OF CONDITIONS FOR FEBRUARY

The month of February varied from moderately dry on parts of the east coast to exceptionally wet in central areas and along the west coast. The Atlantic High Pressure System which pushed patches of low level clouds across the area and weak unstable conditions both contributed to the monthly rainfall total.

### DAILY RAINFALL FOR FEBRUARY 2017

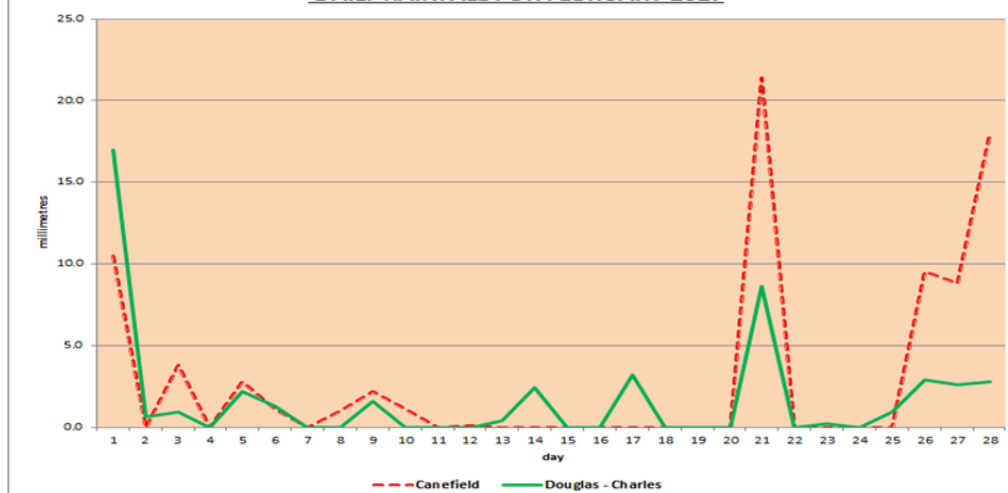


Figure 1 Daily rainfall at Canefield and Douglas-Charles Airports

## SUMMARY FOR FEBRUARY 2017

Parameter (February 2017)	Canefield Airport	Douglas-Charles Airport
Rainfall Total	80.3mm (normal)	47.6mm (below normal)
Normal	45.8 to 81.7mm	77.2 to 106.7mm
Wettest day	21st (21.4mm)	1st (17.0mm)
Wet Days ( $\geq 1.0$ mm)	11 days	10 days
Temperature	26.4°C	26.4°C
30 year average	26.4°C	25.9°C
Maximum Temperature	32.0°C (4th)	30.5°C (21st)
Minimum Temperature	19.4°C (17th)	18.5°C (22nd & 23rd)
Relative Humidity	65%	73%
Maximum wind gust	52km/h (28th)	63km/h (28th)
Average daily sunshine hours	-	7hrs 36mins
Normal		7hrs 18mins

Table 1 February 2017 weather parameters

## EL NIÑO ALERT!!!!

- ◆ ENSO-neutral conditions have returned and is expected to remain at least towards the end of the dry season.
- ◆ Some models anticipate an onset of El Niño into the 2017 wet season.
- ◆ ENSO neutral conditions have little effect on rainfall or temperatures.
- ◆ However, if El Niño manifests by June-July-August 2017, odds are in favour of drier weather with less extreme rainfall than usual for the first half of the wet season.

- ◆ In the north and northeast regions the weather conditions impacted negatively on onion crops. For instance, onion crops that were established as scheduled and had good germination rate suffered from the impacts of heavy rain showers. In high rain fed areas, crops established in poorly drained plots were washed away. The rehabilitation and expansion of passionfruit crop was undertaken in the northern region.
- ◆ In the south and northeast agricultural regions the Irish potato planting season began late. The sale of seeds is currently ongoing. Farmers are undertaking their land preparation activities to include; clearing of weeds, tilling of soil, the application of fertilizers, white lime and sowing of potato seeds.
- ◆ In the western region there is an approved project towards the purchasing of a water truck for water distribution to the farming community. The water storage tank being constructed is still a work in progress. This intervention will be most needed by farmers especially during the dry season. The western region is planning a pesticide training with respect to the use of agro-chemical in vegetable production.
- ◆ There is an ongoing Farmer's Field School being conducted in the central agricultural region where slope stabilization, land preparation and tilling of soil were the interactive lessons demonstrated for the month. During land preparation activities the impacts of weathering on different soil types and tilling were observed.



Slope stabilization in Cochrane



Soil tilling demonstration at Farmer's Field School

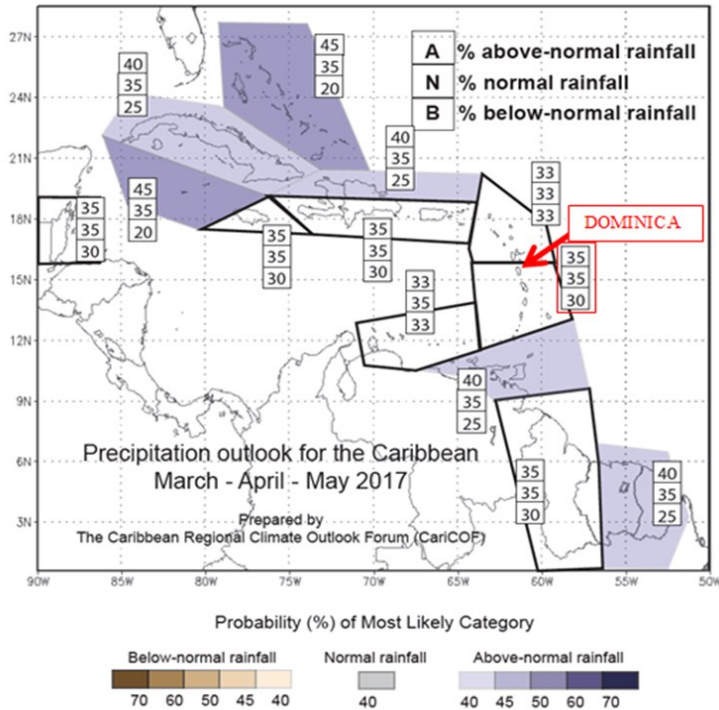
- ◆ Banana Tissue Culture Plants are being prepared for farmers willing to establish and expand their operations. Plantlets are currently being hardened. This process involves the gradual introduction of seedlings to the outdoors by placing them in a protected location outside for a specific time. This process enables the seedlings to be able to adapt to the weather conditions in the open fields.

Stages of a Banana Tissue Culture plant



- ◆ Inputs are available under the horticulture programme to assist farmers in the programme. Fertilizer and white lime were incorporated in the production system for above and below crops. This intervention should have a positive correlation with crops being produced.
- ◆ The agricultural programme within schools received some attention for the month. Assistance was given to those who experienced negative impacts from weather conditions and they were taught how to practice climate smart agriculture.
- ◆ The scale insect is being controlled by the release of natural enemies. However, there are reports from the extension service that the insects are spreading to other nearby farming communities. The breadfruit crop is one of the crops currently being affected and the symptoms are clearly visible.

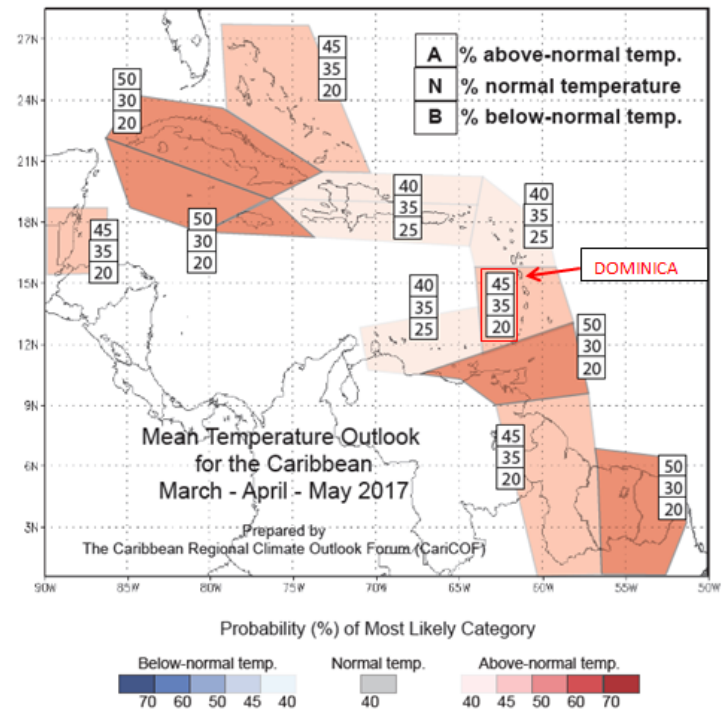
## Rainfall Outlook



### Forecast:

- ◆ Slightly above to normal rainfall totals can be expected at least up to April 2017. However, there are uncertainties beyond that. (Normal range-approximately 250 - 400mm)
- ◆ The usual amount of wet days are not expected to change significantly (low confidence) ( forecast range: 21 to 59 days)
- ◆ A slight increase in 7-day wet and or very wet spells frequency (low to medium confidence) (7-day wet spells(forecast range: 0 to 4). About one to two 3-day extreme wet spells can be expected.
- ◆ There are no drought concerns for Dominica for the season.
- ◆ The build-up of usual dry season impacts on water availability should be slower than usual.
- ◆ Flash flood potential is not a major concern until the end of April.

## Temperature Outlook



### Forecast:

- ◆ Temperatures across the Caribbean are forecast to rise gradually and become more uncomfortable throughout the period.
  - ◆ Heat discomfort will probably grow more slowly in the Windwards than at this time in the past couple of years.
  - ◆ The chances of heat waves are appearing in May and June for many islands.
- ⇒ (Maximum temperature normal range: 29-31°C)  
(Mean temperature normal range: 26-28°C)  
(Minimum temperature normal range: 22-23°C)

### Probability :

**Maximum/ day-time temperature:** 45% chance of above normal; 35% chance normal; 20% chance of below normal

**Mean temperature:** 45% chance of above normal; 35% chance normal; 20% chance of below normal.

**Minimum/ night-time temperature:** 45% chance of above normal; 35% chance normal; 20% chance of below normal.



## CLIMATE SUMMARY FOR MARCH

Parameter	Canefield Airport	Douglas-Charles Airport
Rainfall normal	31.6 to 56.0mm	74.2 to 130.3mm
-highest total	129.2mm (2004)	317.4mm (1995)
-lowest total	5.5mm (2005)	27.7mm (1994)
Temperature	26.9°C	26.4°C
-maximum	34.4°C (2010)	32.3°C (2010)
-minimum	18.1°C (2009)	17.2°C (2000)
Chance of 5 day dry spell	97%	65%
Chance of 10 day dry spell	71%	26%

## FARMER'S OUTLOOK

- ♦ As we move into the second half of the dry season, farmers need to study their soil moisture content and ensure that their soil is given adequate attention. Composting is one way to achieving the right soil moisture content.

Extension services will be focusing on composting technique and training of young farmers.

Some of the benefits include but not limited to:

- ⇒ Adding compost to the farm helps to neutralize its pH and improve the cation exchange capacity (CEC) of soils, increasing their ability to hold nutrients for plant use.
- ⇒ Compost assist in binding soil particles together. It allows the soil to resist compaction and increasing its ability to hold moisture and nutrients. It also increases infiltration and permeability of heavy soils, thus reducing erosion and runoff.

- ⇒ Compost is an organic matter resource that has the unique ability to improve the chemical, physical and biological characteristics of soils. It contains plant nutrients but is typically not characterized as a fertilizer.



Compost practices

- ⇒ If the soil is sandy, it may be lacking nutrients. Compost improves the water holding capacity, thus reducing water loss and leaching. It improves the soil structure, porosity, and density, thus creating a better plant root environment.
- ♦ The Cassava expansion project is ongoing. Cassava generally thrives in challenging environments particularly under hot and dry conditions. This is one of the reasons why it has become such an important component of food security in the region. Agricultural experts suggests those traits could make the cassava itself an adaptive strategy for farmers seeking to maintain food security in areas where the arrival of hotter and dryer weather conditions are being experienced.

## MOON PHASES

 FQ:05th
  FM:12th
  LQ:20th
  NM:28th

Agromet bulletins from across the region can be accessed via <http://rcc.cimh.edu.bb/climate-bulletins/agriculture/>

This bulletin is prepared by the Dominica Meteorological Service with support from the Ministry of Agriculture. Feedback on this bulletin should be forwarded to [metoffice@cwdom.dm](mailto:metoffice@cwdom.dm) or [aictu-doa@gmail.com](mailto:aictu-doa@gmail.com). Tele: 767 445 7878, 767 449 1990. Website: [www.weather.gov.dm](http://www.weather.gov.dm) Hotline: 447 5555