



MONTHLY AGRO-METEOROLOGICAL BULLETIN

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DROUGHT WATCH ALERT!!!!

Some models anticipate an onset of El Niño into the 2017 Wet Season. With the expected transition, below normal rainfall is anticipated for the up-coming wet season. Please continue to monitor the situation and conserve water.

OVERVIEW OF CONDITIONS FOR MARCH 2017

Moderately wet conditions were observed across Dominica for the month of March 2017. The Atlantic High Pressure System which carried patches of low level clouds westward across the area and weak unstable conditions generated by trough systems and frontal boundaries contributed to the monthly rainfall total.

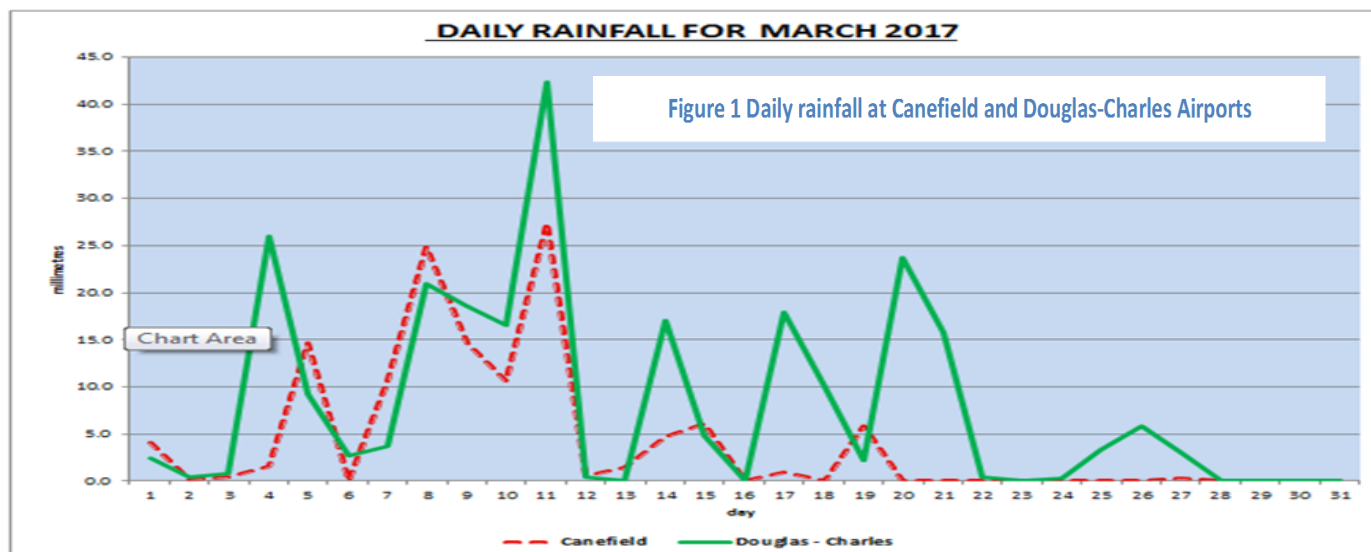
SUMMARY FOR MARCH 2017

Parameter (March 2017)	Canefield Airport	Douglas-Charles Airport
Rainfall Total	129.2mm (above normal)	248.6mm (above normal)
Normal	31.6 to 56.0mm	74.2 to 130.3mm
Wettest day	11th (27.4mm)	11th (42.3mm)
Wet Days (≥1.0mm)	13 days	19 days
Temperature	26.7°C	26.1°C
30 year average	26.9°C	26.4°C
Maximum Temperature	33.1°C (28th)	29.9°C (31st)
Minimum Temperature	20.8°C (6th)	20.4°C (6th)
Relative Humidity	66%	74%
Maximum wind gust	54km/h (8th)	82km/h (9th)
Average daily sunshine hours	-	7hrs
Normal		7hrs 36mins

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Table 1 March 2017 weather parameters



FARMING COMMUNITY

The farming community received two weeks of frequent rainfall in March. A 12-day dry spell affected the western coast during the latter part of the month. An increase in temperatures was also observed as the month progressed.

- ◇ Vegetables, ginger, dasheen, plantain, banana, bay leaf and cassava were the main harvests for the month. Avocado and mango are currently in bloom. Citrus is on the low for the period. Greenhouse farmers are under operations with sweet peppers, tomatoes and lettuce. In the southeast region, the tolima crop was the main harvest. Analysed reports suggests that tolima is a weather sensitive crop whereby extreme rainfall periods affects the starch content of the crop.
- ◇ Establishment of crops also took place during the month to include: root crops, vegetables, ginger, plantain, banana and Irish potato. Some farmers also expanded their existing crop acreage.
- ◇ In the livestock sector, poultry expansion is ongoing and eggs on the local market is readily available whereas there is a shortage of pork. There is also an expansion of rabbitry.

Figure 2 depicts the behaviour of the infestation level of the Black Sigatoka Disease in the four zones being monitored from January to March 2017.

The bold red line represents the threshold level. Any data above the red line represents high infestation level of the disease and any data below the redline represents adequate control and management of the disease. In week 6, 7 and 12 a spray cycle was done and it can be observed that infestation level dropped below the threshold level. Extension officers also reported that greater level of management of the disease is achieved when farmers conduct their on farm cultural practices on a timely basis.

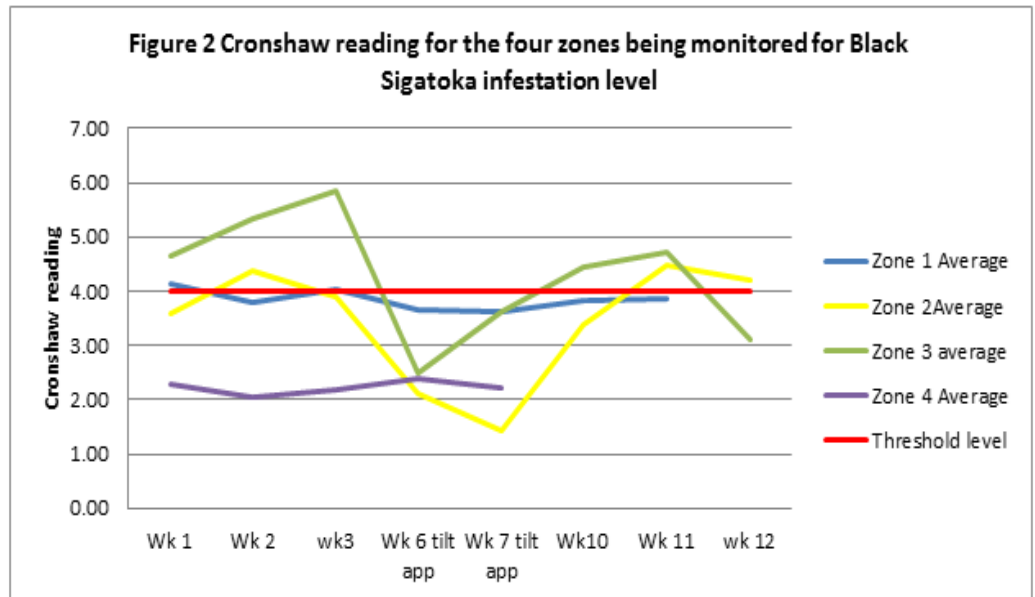


Table 2 indicates crops affected by different diseases and the location

Table 2: Samples analysed for March 2017

Crop	Location	Disease
Tomato	Fortune	Powdery mildew, Thrips, Armyworm damage
Citrus	Goodwill	Citrus greening disease, Sooty mold growth
Citrus	Copthall	Greasy spot disease, Nitrogen & Zinc deficiencies, Algal growth
Mango	6 th Franklyn Lane, Goodwill	Seychelles scale insect
Papaya	Castle Comfort	Erwinia spp.
Seasoning pepper	Warner	Bacterial leaf spot, Zinc deficiency
Mango	Wallhouse	Bronze disease
Wild spinach	Morne Prosper	Armyworms
Irish potato	Bellevue Chopin	Black leg
Irish potato	Bellevue Chopin	Bacterial wilt
Ornamental	Wallhouse	Chewing insect damage

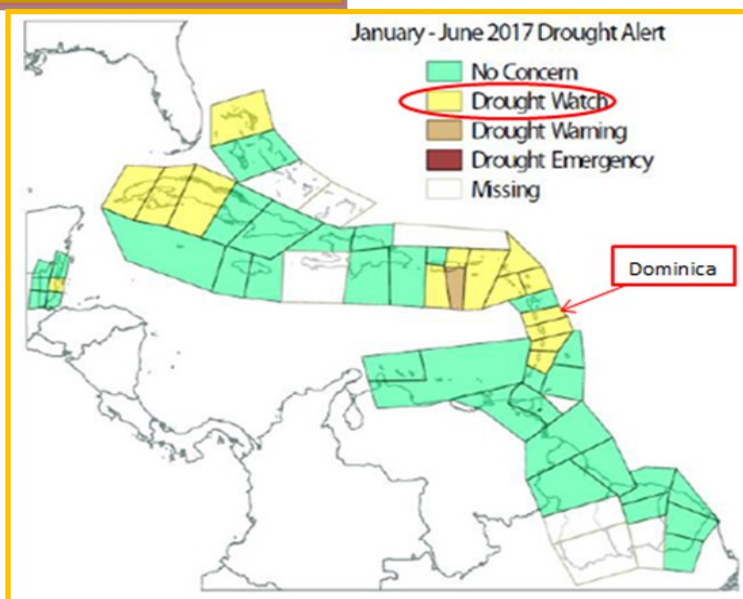
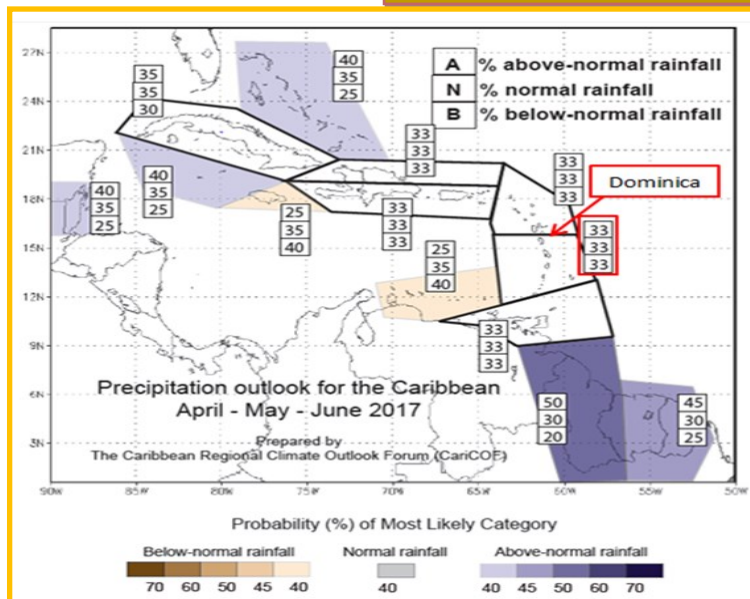
For the month of March 2017 the Diagnostics Report from the Plant Protection and Quarantine Unit indicated that the weather was favourable for the upsurge of pest and disease. Eleven samples were processed for this reporting period.

Most dominant

Black leg and Bacterial wilt- affecting Irish potatoes

Armyworm - damage to Wild spinach, leafy vegetables and tomatoes

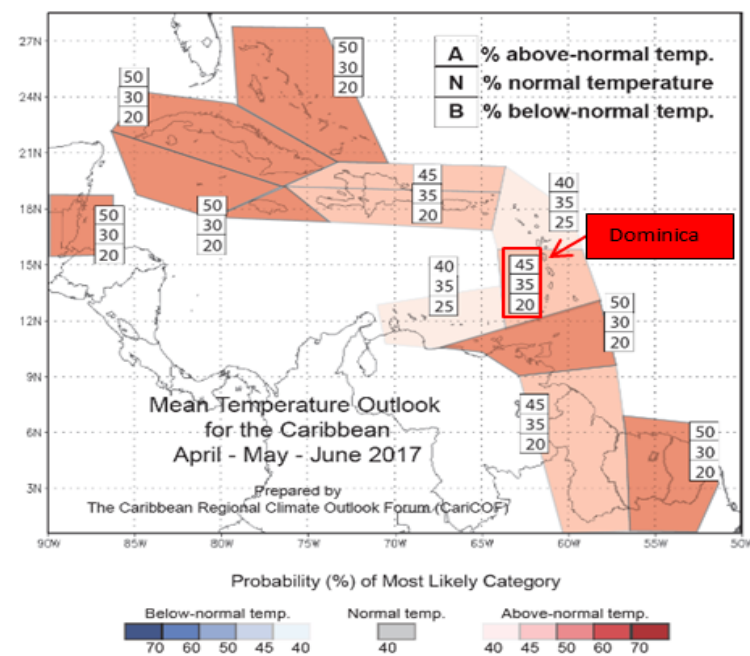
Rainfall Outlook



Forecast:

- ⇒ There are uncertainties at this time for the expected rainfall amounts for the season April to June 2017. However, beyond June with the anticipation of a transition to El. Niño phase, the forecast is for below normal rainfall. (Normal range for April to June- approximately 250 to 400mm) (Normal range for July to September- approximately 600 to 900mm)
- ⇒ An increase in wet days and wet spells are expected as we move into the wet season (June to November).
- ⇒ Flash flood potential is becoming a concern mostly after April
- ⇒ A short term (January to June 2017) drought watch has been issued for Dominica. This means that drought conditions are possible within the next 3 months. Continue to monitor the situation and conserve water.

Temperature Outlook



Forecast:

- ⇒ Temperatures across the Caribbean are forecast to rise gradually and become more uncomfortable throughout the period (slightly above normal).
- ⇒ Heat discomfort will probably grow more slowly in the Windward at this time than in the past couple of years.
- ⇒ The chances of heat waves are appearing in May and June for many islands.
- ⇒ (Maximum temperature normal range: 30-32°C)
(Mean temperature normal range: 27-28°C)
(Minimum temperature normal range: 23-24°C)

CLIMATE SUMMARY FOR APRIL

Parameter	Canefield Airport	Douglas-Charles Airport
Rainfall normal	30.1 to 58.2mm	92.2 to 162.9mm
-highest total	203.6mm (2013)	772.9mm (1981)
-lowest total	3.5mm (1983)	18.8mm (1997)
Temperature	27.9C	27.2°C
-maximum	34.8°C (2005)	33.1C (2005)
-minimum	18.6°C (2009)	18.0°C (1985)
Chance of 5 day dry spell	97%	67%
Chance of 10 day dry spell	67%	23%

Table 3 climate summary for April

FARMER'S OUTLOOK

- ♦ Farmers are encouraged to continue their "on the farm" cultural practices and must be vigilant against all pest and disease.
- ♦ Application of pen manure and other compost would be essential for vegetables and other short term crops.
- ♦ Although the dry season thus far had adequate moisture, farmers must ensure that water storage on farm is practiced and precautionary measures are taken during dry and hot days.

Farmers need to know some basic information about the effect of temperature on plant and soil micro-organism.

- ♦ Temperature directly determines the rate of physiological activities such as enzyme activity and indirectly by affecting soil physical and chemical properties such as nutrient mobility, mineral weathering and evaporation rates.
- ♦ For some soil organisms they function within a specific temperature range. Hence, organisms may be able to survive outside the soil's temperature range or produce

survival structures to allow them to survive under adverse conditions.

- ♦ Within an organism's temperature range, there is a temperature optimum at which biological function performs best. Beyond this value, cellular processes do not work so efficiently and as the temperature increases away from their upper limit there are irreversible changes to the cell properties leading to cell death.

Water is essential for the survival of the micro-organism and is a solvent for nutrients and other chemicals.

- ♦ Soil moisture affects soil temperature and soil aeration. The soil has pores. These soil pores affects the movement of micro-organisms and crop wilting point.
- ♦ In very dry soil, plants may not be able to extract sufficient water through the roots because of the energy it takes to remove water from the small pores. This is known as the permanent wilting point, beyond which the plant cannot recover.
- ♦ Conversely, under wet conditions, oxygen does not diffuse through the soil as readily so the levels available to organism may become depleted leading to anaerobic conditions.
- ♦ Fungi tend to be more resistant to water stress than bacteria. Some micro-organism can tolerate drier conditions than others.

MOON PHASES



FQ:03rd



FM:11th



LQ:19th



NM:26th

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

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