MONTHLY AGRO-METEOROLOGICAL BULLETIN

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OVERVIEW OF CONDITIONS FOR APRIL 2017

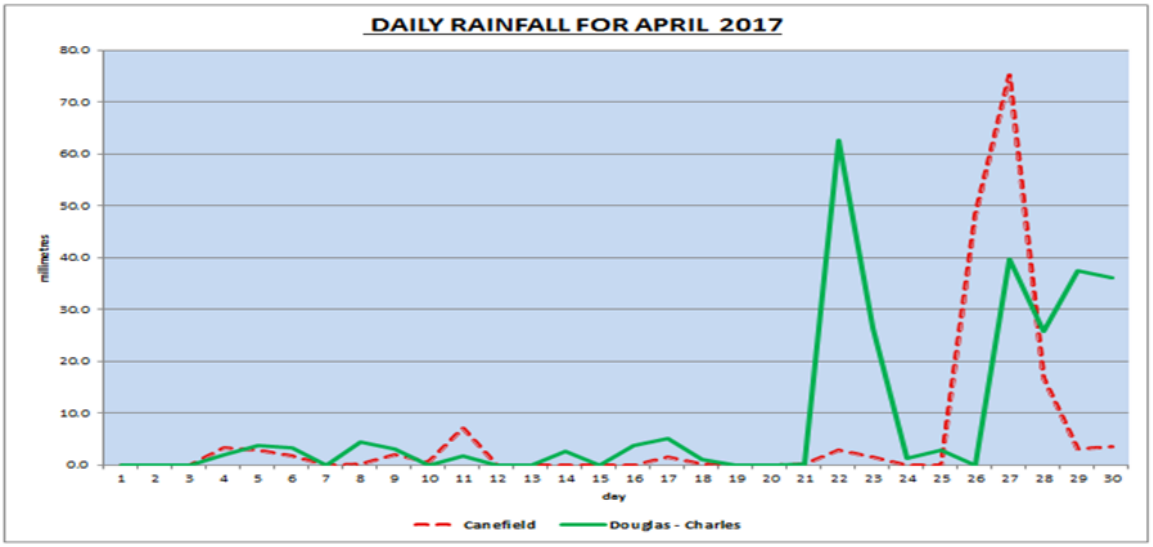


Figure 1 Daily rainfall at Canefield and Douglas-Charles Airports

The island of Dominica received minimal rainfall during the first 3 weeks of the month. Moisture and instability generated by a dissipating frontal boundary which lingered across the area and a trough system during the latter part of the month resulted in an increase in rainfall activity.

SUMMARY FOR APRIL 2017

Parameter (APRIL 2017)	Canefield Airport	Douglas-Charles Airport
Rainfall Total Normal Wettest day	171.8mm (above normal) 30.1 to 58.2mm 27th (75.2mm)	264.3mm (above normal) 92.2 to 162.9mm 22nd (62.7mm)
Wet Days (≥1.0mm)	13 days	18 days
Temperature 30 year average	27.9°C 27.9°C	26.9°C 27.2°C
Maximum Temperature	34.0°C (8th)	30.5°C (13th)
Minimum Temperature	21.1°C (9th)	20.3°C (21st)
Relative Humidity	67%	75%
Maximum wind gust	48km/h (11th)	50km/h (17th)
Average daily sunshine hours Normal	-	6hrs 42mins 8hrs 12mins

Table 1 April 2017 weather parameters

IN THIS ISSUE

The Canefield and the Douglas-Charles Airports both recorded their second consecutive month with above normal rainfall total. This was the second wettest April on record (1982-present) at Canefield. The drought watch alert issued for Dominica late March was discontinued. Continue to monitor the situation in the coming months.

FARMING COMMUNITY

While the weather conditions were favourable during the month for some agricultural practices and crops, especially young seedlings that were transplanted, some farmers reported that increased rainfall activity resulted in the loss of flowers especially from fruit crops. This is expected to have a negative impact on fruit production. The main crops established for the period were: vegetables, root crops, pumpkin and watermelon. The main crops harvested were: white potato, root crops, vegetables, banana, plantain, passion fruit, pumpkin and christophene. The main diseases identified for the month includes: Army worms, Pinworms, Scale insects and aphids.

An update on the White potato Cropping Season

The Extension Staff of the Division of Agriculture has been working closely with eighty-seven (87) farmers in the establishment and production of white potatoes during the 2016-2017 season.

TABLE 2: BAGS/ACREAGE ESTABLISHED & FARMER PARTICIPATION

AGRICULTURE REGION	ESTABLISHMENT (BAGS)				ACREAGE	FARMERS			
	JAN	FEB	MARCH	TOTAL		JAN	FEB	MARCH	TOTAL
Central	---	15	5	20	1.25	---	8	7	15
South	60	133	5	198	12.6	20	33	2	55
Northeast	18	45	---	63	4	6	10	---	16
Northwest	1	15	---	16	1.1	1	---	---	1
Total	79	208	10	297	18.95	27	51	9	87

The extension staff in the South, Central, North and Northeast Agricultural Region have conducted several farm visits in an effort to conduct an assessment of field status. The general condition of fields appeared good and upon carrying out random sampling an average yield of 6 pounds per plant was recorded. Table 3 provides information on crop production in Agricultural Regions where white potatoes were established.

TABLE 3: ACREAGE AND PRODUCTION FORECAST

REGION	ACREAGE ESTABLISHED	PRODUCTION (POUNDS)			
		APRIL	MAY	JUNE	TOTAL
Central	1.25	---	4, 125	---	4, 126
South	12.6	16, 830	37, 307	1, 650	55, 799
Northeast	4	5, 049	12, 227	---	17, 280
Northwest	1.1	330	4, 208	---	4,539
Total	18.95	22, 209	57, 903	1, 650	81,745

The Division of Agriculture through farm visit for the period determined that:

Farmers generally attributed low crop yields to the adverse weather conditions for both establishment and harvesting in the Northeast region.

The Desire variety has proven to be the most preferred and suitable based on low levels of infestation, adaptability to soils and micro-climate, yield and storage ability, consumer and farmer acceptance and most importantly, it's been noted as the most resilient or tolerant to pest/disease infestations resulting in favourable yields.

Farmers have also noted their acceptance of Spunta which has demonstrated its production (harvest performance in weights and size) and consumer acceptance.

Extension staff attributed some of the reduction in yields to crop management e.g. the absence or irregular sequence of preventative spray control for fungal diseases.

Farmers reported that the El Mundo variety matured earlier, but was most fragile or prone to pest/disease infestation and suffered the largest loss.

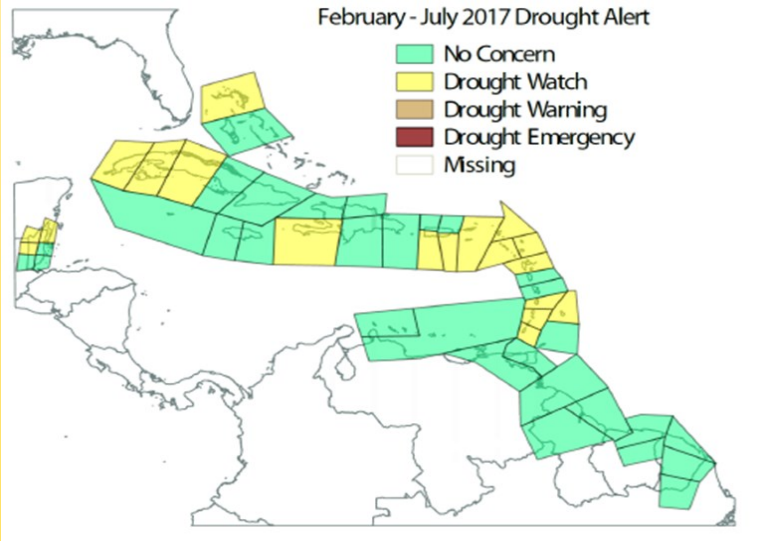
Rainfall Outlook

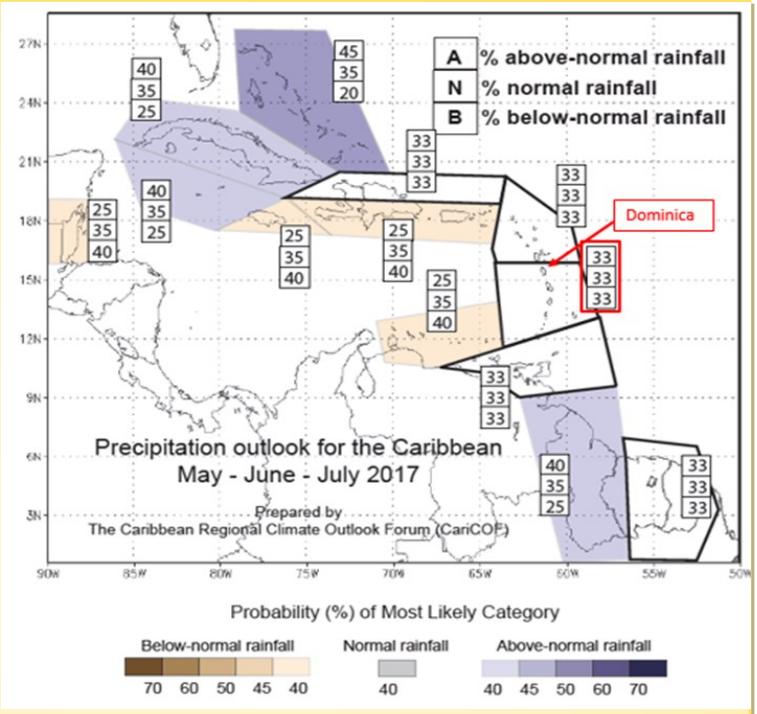
Forecast:

Uncertainties continues for the next season's rainfall expectation, however, below to normal rainfall total is expected for the second half of the wet season (Normal range for May to June- approximately 400 to 600mm) (Normal range for August to October- approximately 600 to 900mm)

The amount of wet days (≥1.0mm) is expected to remain near normal (36-67 days) for the season with an increase in 7-day wet and very wet spells.

Flash flood potential is becoming a concern .





The drought watch alert issued for Dominica late March was discontinued. A drought watch alert remained for the rest of the Lesser Antilles. Currently there are no short term (February to July 2017) and hydrological (June 2016 to May 2017) drought concerns for Dominica. Continue to monitor the situation in the coming months.

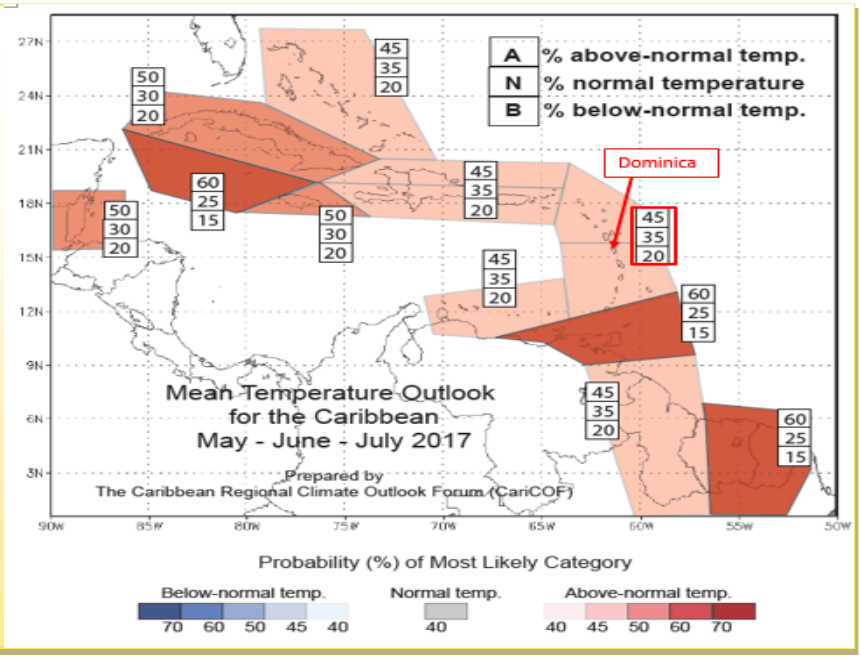
Temperature Outlook

Forecast:

Night and day-time temperatures are forecast to be uncomfortably hot for many islands, with high humidity and a high chance for heat waves.

NOTE: This scenario becomes more likely and heat more severe, if a moderate or strong El Niño manifests by August.

(Maximum temperature normal range: 30-32°C)
(Mean temperature normal range: 27-29°C)
(Minimum temperature normal range: 24-25°C)



CLIMATE SUMMARY FOR MAY

Parameter	Canefield Airport	Douglas-Charles Airport
Rainfall	44.8 to 116.9mm	139.1 to 262.9mm
-highest total	298.3mm (1987)	815.7mm (1987)
-lowest total	9.8mm (2007)	12.1mm (2001)
Temperature	28.8°C	28.0°C
-maximum	34.6°C (2005)	33.0°C (2010)
-minimum	20.5°C (1989)	19.8°C (1984/1986)
Chance of 5 day dry spell	96%	53%
Chance of 10 day dry spell	50%	17%

Table 4 climate summary for May

MOON PHASES

FQ:02nd FM:10th LQ:18th NM:25th

FARMER'S OUTLOOK

White Potato Crop Outlook

The majority of the white potato crop will be harvested in the month of May.

Before harvesting the crop, farmers can practice top-kill.

Top-kill with a weedicide or brush cutting, approximately 2-3 weeks prior to harvesting and after harvesting 70% of the crop, has shown natural and physical signs of maturity by senescence/ browning (10-12 weeks post establishment).

This Jamaican technique allows all nutrition and energies of the dying plant to translocate from the leaves to the tubers for increased bulking and tonnage of the crop.

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 or aictudoa@gmail.com . Tele: 767 445 7878, 767 449 1990. Website: www.weather.gov.dm Hotline: 447 5555

Impacts of High Temperature

- Germination is a process which involves a number of factors to include air, water, light and temperature. Germination rate increases with temperature up to an ideal point. Some plant seeds, including cool season vegetables like lettuce and broccoli, germinates best at cool temperatures (15 -20°C), whereas warm season plants germinates best when temperatures are higher than 21°C. Extremely high temperatures can hinder seed growth and development.

- Some crops are more susceptible to high temperature during critical growth stages e.g. pollination and flowering stages.

- Increasing temperatures can reduce plant photosynthetic and transpiration efficiencies which collectively can negatively impact yield.

- High temperatures can induce heat stress. Heat stress, in general, is defined as the rise in air temperature beyond a threshold level for a period sufficient to cause permanent damage to plant growth and development. Heat stress is a complex function of intensity, duration and the rate of the increase in air temperature. Therefore, during extreme heat periods soil water content must be kept at an adequate level to provide for plant uptake and to minimize the impact of higher soil temperature caused by higher air temperature. Prolonged heat stress results in root shrinkage, anatomical deformations and weak root-soil contact which limits water and nutrient supply.

Hurricane Preparedness Tips

- The 2017 Hurricane Season and Wet Season begins officially on June 1st. Farmers should ensure that all necessary preparations are in place. Keep updated with information disseminated by the Dominica Meteorological Service via radio, television, website and Facebook.

- Ensure that farms have proper sanitation and drainage systems in place as increasing rainfall activity improves environmental conditions for mosquitoes and moisture related pests.