Issue: 34
October, 2015

This bulletin is prepared by the Hydrometeorological Service of Guyana. We welcome feedback, suggestions and comments on this bulletin. Correspondences should be directed to: The Chief Hydrometeorological Officer (Ag), and the Agronomist.

Hydrometeorological Service of Guyana

Farmer's Monthly Weather Bulletin

CELEBRATING 50 YEARS OF SERVICE 1965-2015

THEME: COMMITED TO ADVANCING HYDROMETEOROLOGY FOR A SUSTAINABLE FUTURE

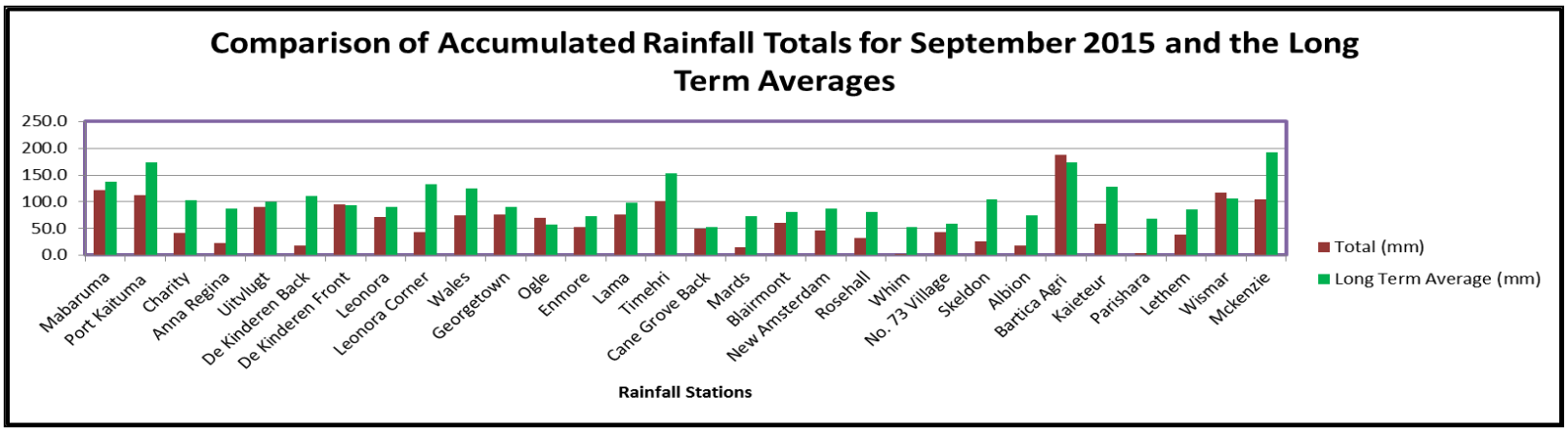
HIGHLIGHTS

- Guyana was classified as Very Dry (VD) for the month of September ,2015 with an average of 60mm rainfall within 5 rain days.
- The highest one day rainfall total was recorded at Onverwagt, Region # 6 , with a total of 140.0mm of rainfall on the 13th of September, 2015.
- Analysis of the ten administrative regions showed that Region #7 recorded the highest mean with 161.9mm of rainfall with 11 rain days.
- Lethem recorded the highest daily maximum temperature of 36.6^{0}C.
- Currently, Guyana is in its secondary dry season of 2015.
- Below normal to normal rainfall conditions predicted for October through December.
- Above normal to normal temperatures predicted for October through December.




Rainfall Overview for October, 2015

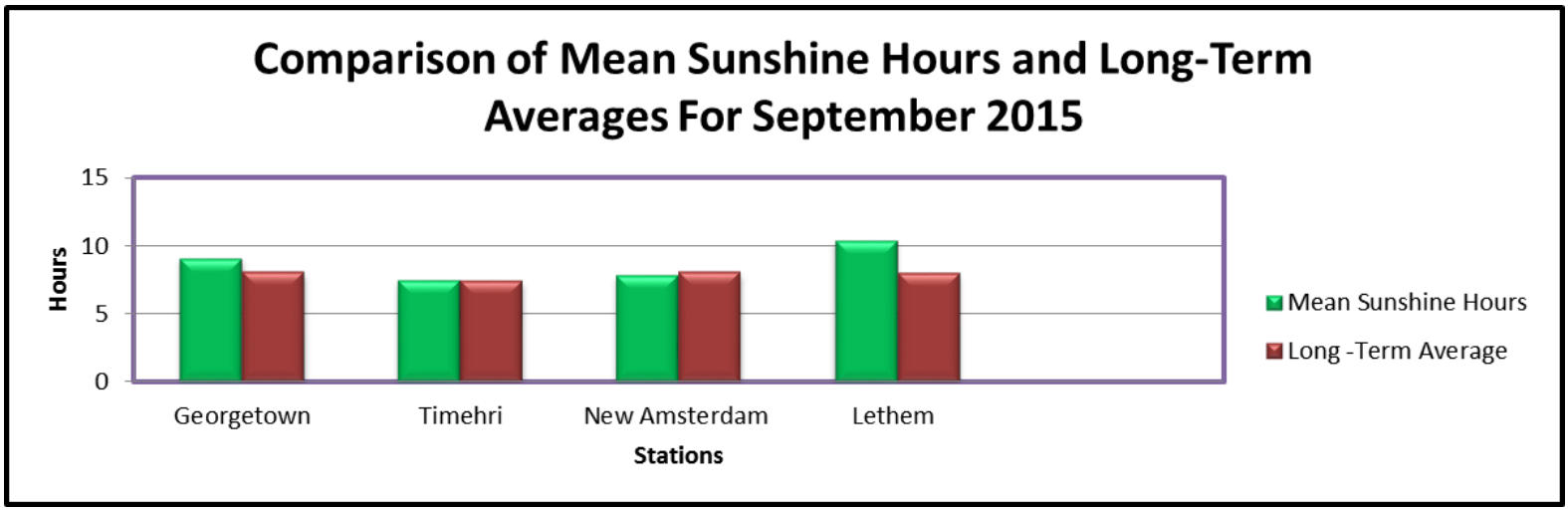
For the month, Regional Classification showed that Region #7 recorded the highest monthly average rainfall total of 161.9mm, with 11 rain days, whereas Region #9, recorded the lowest average monthly rainfall total of 17.3mm of rainfall with 1 rain day.Region #6 Onverwagt recorded the highest one day rainfall total of 140.0mm on 13th September,2015. Data analyzed thus far has revealed that most stations in Guyana recorded values below their long-term averages for the month. The graph below shows the comparison of accumulated rainfall and long-term averages for selected stations.



Fig#1: Comparison of the Accumulated Rainfall Totals and Long -term Averages of selected stations for September 2015.

Sunshine Hours Summary for October 2015

Lethem recorded the highest mean sunshine hour of 10.4 hours for the month while Ogle the highest one day total of 11.4 hours on the 6th of September. Of the stations analyzed Lethem , Timehri and Georgetown were the only three stations that recorded mean sunshine hours above their long-term averages. Timehri recorded the lowest mean sunshine hour of 7.5 hours, which was above it's climatological average by 0.1 hour.

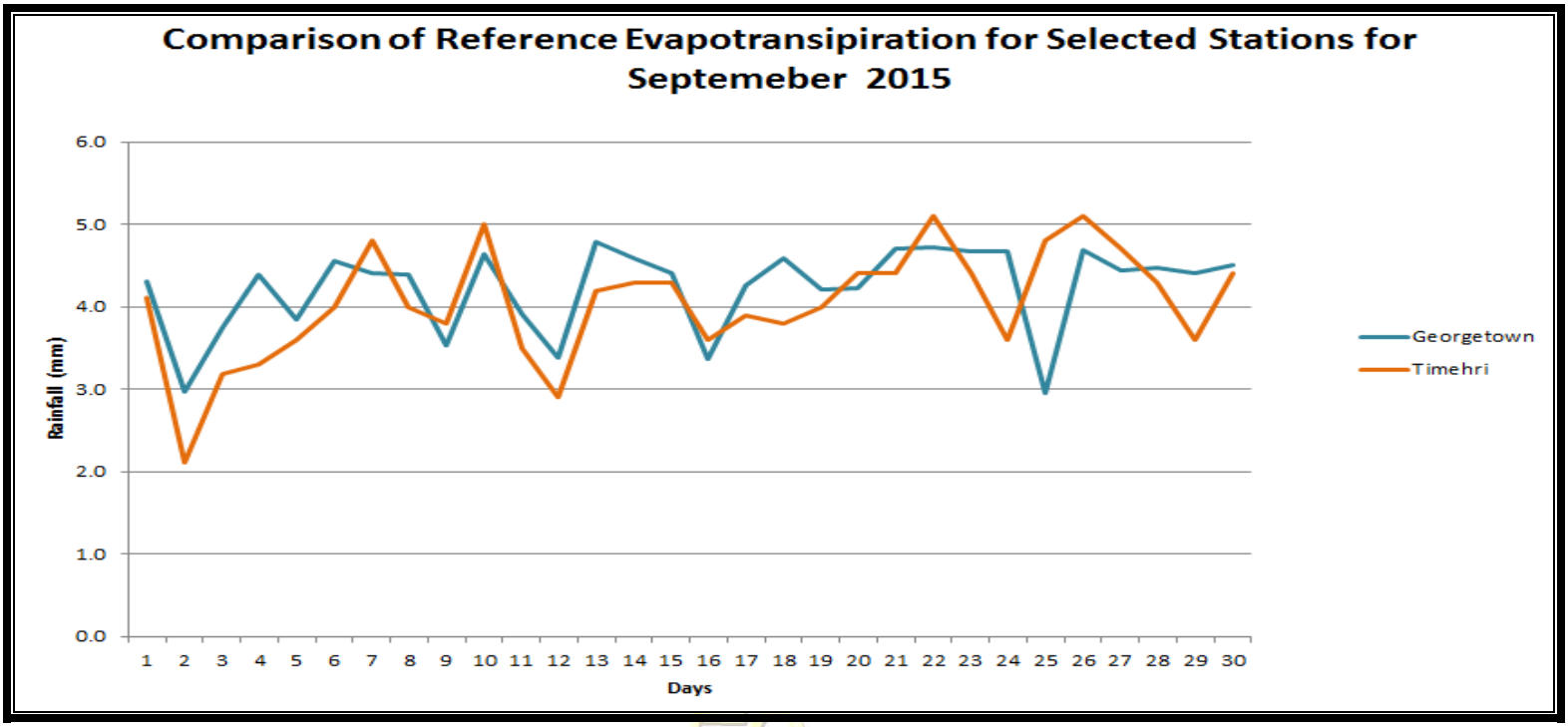


Fig# 2: Comparison of the Mean Sunshine hours with the Long-term Averages for selected stations for September 2015.

Table #1: Classification of **Regional** Rainfall Data for the Month of **October**, 2015

Region	Average Rainfall (mm)	Average Rain day	Classification	Remarks
1	115.5	10 days	Dry (D)	Mabaruma recorded 122.3mm of rainfall with 10 rain days.
2	50.9	2 days	Very Dry	Anna Regina recorded 23.1mm of rainfall with 1 rain day.
3	73.9	5 days	Dry (D)	De kindren Back recorded 17.8mm of rainfall with 2 rain days.
4	79.0	5 days	Dry (D)	Ogle recorded 70.4mm of rainfall with 6 rain days.
5	37.1	3 days	Very Dry (VD)	Blairmont recorded 60.7mm of rainfall with 2 rain days.
6	21.4	1 day	Very Dry (VD)	Rosehall recorded 31.2mm of rainfall with 8 rain days.
7	161.9	11 days	Moderately Wet (MD)	Bartica Agri recorded 188.3mm of rainfall with 8 rain days.
8	Kaieteur recorded 58.2mm of rainfall with 7 rain days. Very Dry (VD)			
9	17.3	1 day	Very Dry (VD)	Lethem recorded 38.4mm of rainfall with 1 rain day.
10	104.6	3 days	Dry (D)	Mackenzie recorded 105.2mm of rainfall with 14 rain days.

Table #2:Comparison of the Reference Evapotranspiration (ETo) for selected stations for the month of October,2015



Fig# 3: Comparison of the Reference Evapotranspiration for selected stations

For the month of September the highest mean evapotranspiration was recorded at Georgetown with a total of 4.2mm, while the highest one day evapotranspiration total was recorded at Timehri at 5.1mm on the 22 September.

Data analyzed shows Timehri having the lowest one day total of evapotranspiration at 2.1mm on the 2nd September.

Note: The calculated potential evapotranspiration method of Penman - Monteith, which assumes an unlimited water supply, depends on temperature, relative humidity, wind, and generally provides a better representation of crop-water losses and requirements.

Temperature Overview for September, 2015

For the month, the highest mean maximum temperature was recorded at Mabaruma Region #1 with a total of 35.0^{0}C, while Lethem Region #9 recorded the highest daily maximum temperature of 36.6^{0}C on the 21st of September also the lowest daily maximum of 29.0^{0}C on the 19th of September, 2015. Ogle Region #4 recorded the highest mean minimum temperature of 25.5^{0}C. Georgetown recorded the lowest mean maximum temperature of 31.5^{0}C and Timehri the lowest mean minimum temperature of 21.8^{0}C also the lowest daily minimum temperature of 20.0^{0}C on September 24th 2015.

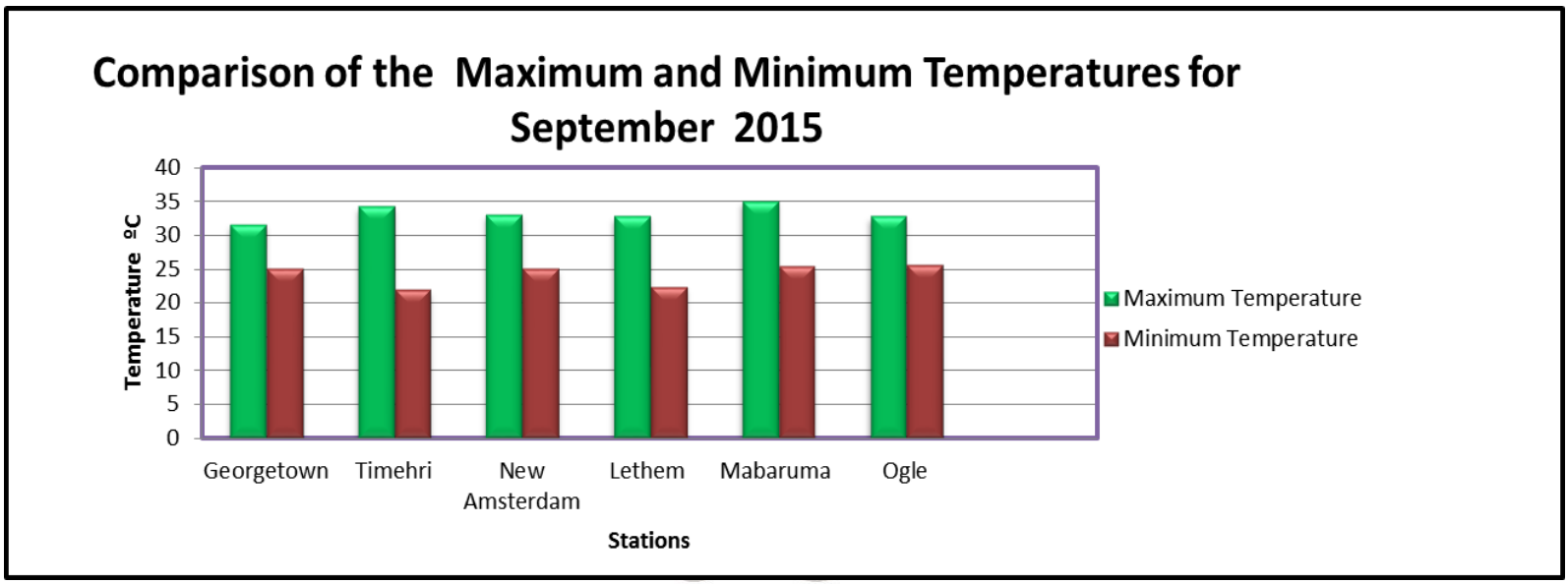


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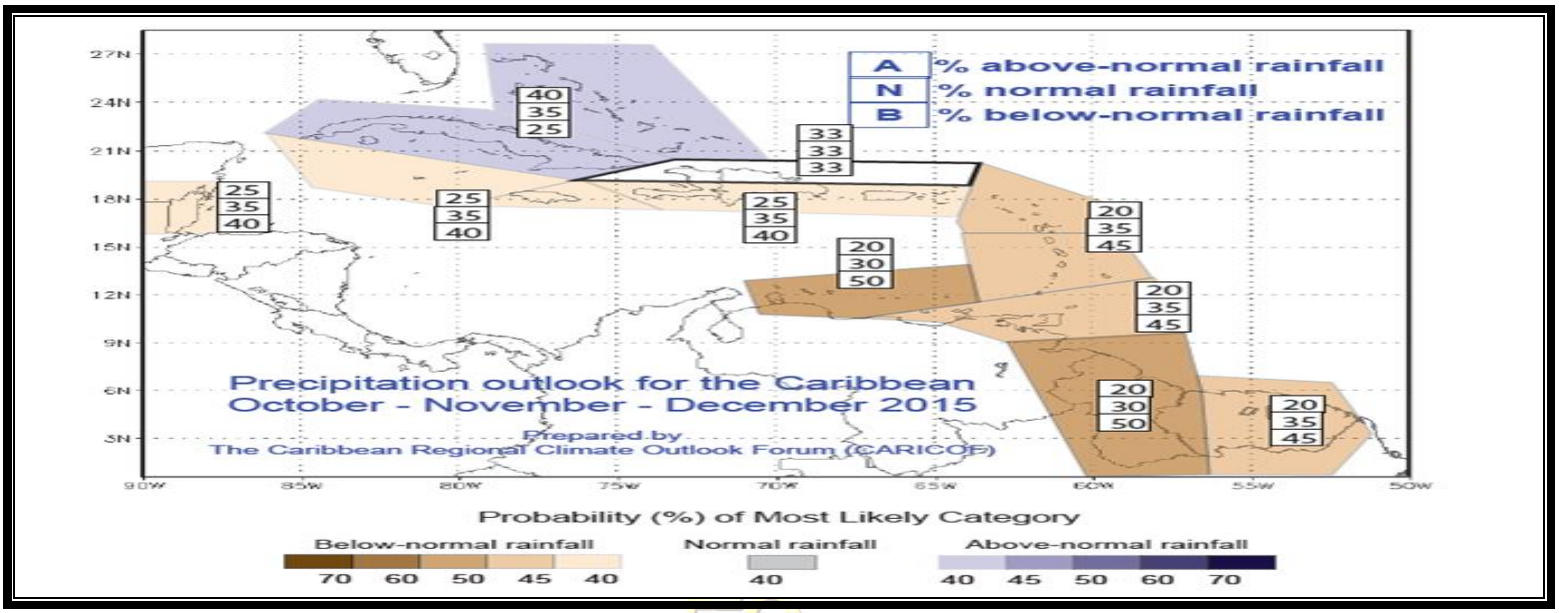
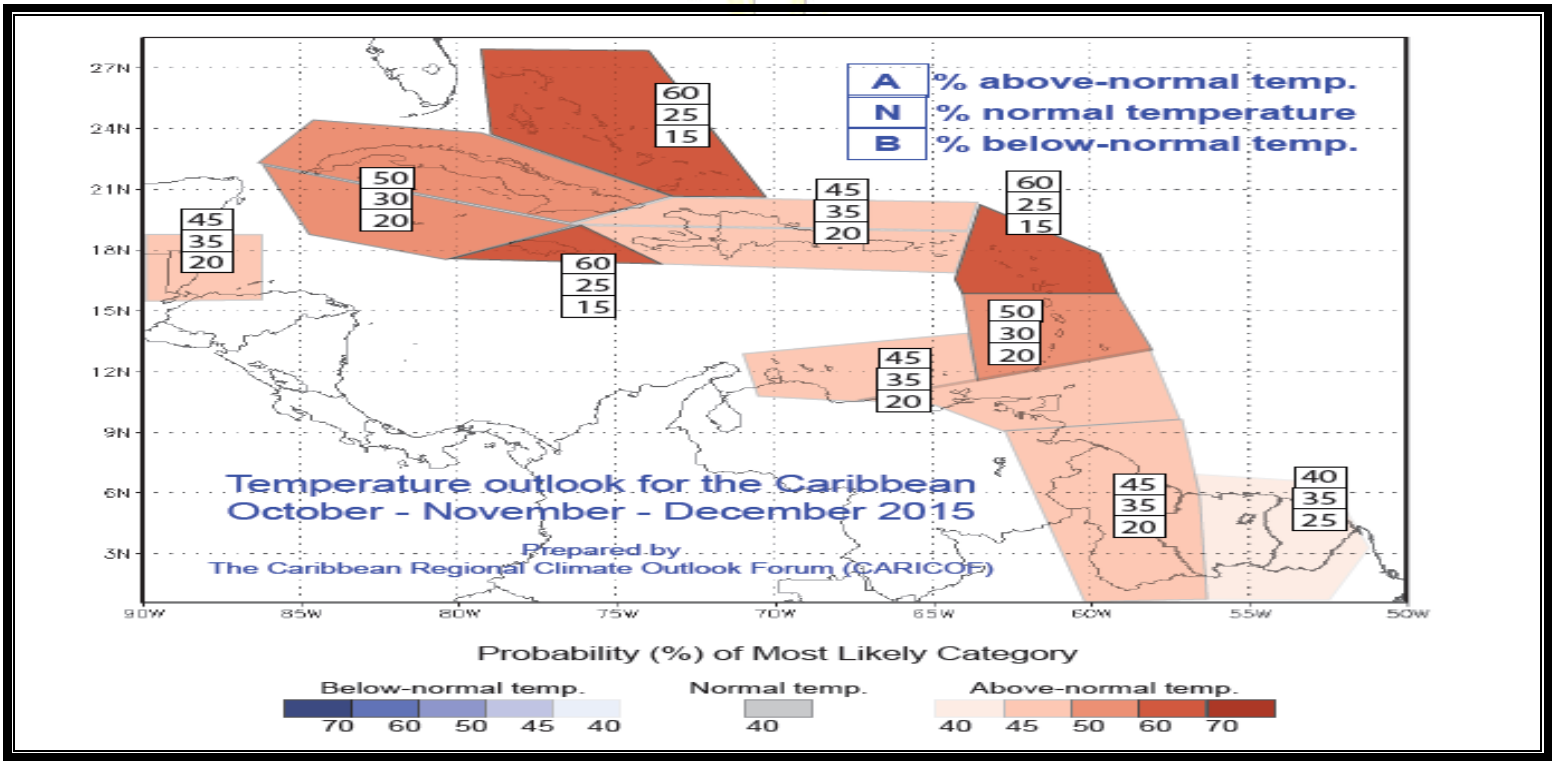
Fig # 4: Comparison of the Average Maximum and Minimum temperatures for selected stations for September 2015.

Seasonal Forecast for October– December, 2015

Guyana is currently in its secondary dry season of 2015, the recent seasonal forecast concludes that below normal rainfall is expected for the period of October to December, with this Guyana will continue to see generally dry conditions over most parts of the country with above normal temperatures. However, there are still indications that some downpours will be observed.



Fig# 5: Chart showing the Percentages of above Normal (A), Normal (N) and Below Normal (B) rainfall conditions for Guyana and the Caribbean.



Fig# 6: Chart showing the Percentages of above Normal (A), Normal (N) and Below Normal (B) temperature conditions for Guyana and the Caribbean.

Table#3 Rainfall Normals and Averages of selected rainfall stations

Regions	Station Names	October	November	December	Regions	Station Names	October	November	December
1	MABARUMA *	214.9	210.2	246.9	5	BLAIRMONT	54.8	97.8	228.8
	WAUNA	207.0	212.0	245.3		MARDS	67.4	116.1	203.8
	PORT KAITUMA	160.7	190.4	270.8	6	ALBION	64.3	29.2	197
2	ANNA REGINA*	110.7	182.3	283.4		SKELDON	83.8	114.7	151.7
	CHARITY	101.3	212.6	285.5		CRABWOOD CREEK*	53.3	92.3	98.1
	Mc NABB	123.9	185.0	247.3		ROSE HALL	57.4	84.2	266.6
	WAKAPOW	120.7	212.8	342.5		NIGG 58	75.7	84.9	177.1
	ONDERNEEMING	85.0	141.5	225.9		ALBION 33	51.2	60.4	162
3	BOERSARIE	139.9	205.2	345.8		#73 VILLAGE	78.9	101.7	174.5
	DeKENDEREN B	132.3	197.9	325.2		# 54 VILLAGE*	40.2	79.4	139.9
	DeKENDEREN F	127.1	158	302.2		ANKERVILLE	65.6	77.4	185.2
	LEONORA F	117.9	156.3	265.5		MIBIKURI	26.5	95.4	183
	LEONORA B	125	163	282.5		MARA LAND DEV. SCHEME*	59.3	95.1	165.9
	WALES	125.3	171.7	238.5		NEW AMSTERDAM	59.6	94.7	223
	UITVLUGT B	113.6	143.9	257.7	7	APAIKWA	118.1	190.9	299.6
	La BAGATELLE LEGUAN*	88.3	113.2	205.6		MAZARUNI	147.9	171.7	197.1
4	BOTANIC GARDENS	89.4	175.9	270.9		BARTICA DEM. STATION*	182.2	139.8	151.7
	TIMEHRI	132.6	181.6	258.3		JAWALLA	107.8	175.7	157.8
	CANE GROVE B	62.6	90.8	199.1	8	KAIETEUR FALLS *	****	****	452.3
	CANE GROVE F	65.3	120	214.7	9	LETHEM	54.6	33.8	40.8
	L.B.I FRONT	73.8	140.5	246.3		KARASABAI	21.6	9	5.1
	OGLE FRONT	64.6	136.7	222.6		DADANAWA	45.5	57.5	37.6
	ENMORE FRONT	78	127.8	268.2	10	GREAT FALLS	110.3	152.5	221.2
	KAIRUNI*	84.4	130.7	121.6		WISMAR*	97.5	107.3	148.5

1965-2015

NOTE = The normals for various stations were calculated by the use of rainfall data from the year 1981- 2010 (30 years).
* = Rainfall Averages (less than 30 years of data).

Table # 4: Average rain days for the months October -December for selected stations

Station Name	October	November	December
Georgetown Botanical Gardens	8 days	12 days	18 days
Timehri Meteorological Station	5 days	14 days	20 days
Ogle	6 days	11 days	17 days
Lethem	5 days	3 days	4 days
Anna Regina	9 days	10 days	14 days
New Amsterdam	6 days	9 days	16 days

NOTE: Rain day = More than 1 mm of rainfall within a 24 hrs period.

TABLE#5: SPRING TIDE TABLE FOR OCTOBER, 2015

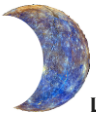
Date	HIGH WATER	
1st	06 16	3.07
	18 09	3.14
2nd	07 06	2.87
	18 53	2.94
3rd		
	19 44	2.72
9th		
	14 24	2.77
10th		
	14 57	2.86
11th	02 46	2.80
	15 28	2.91
12th	03 21	2.85
	15 56	2.94
13th	03 54	2.88
	16 24	2.94
14th	04 28	2.88
	16 51	2.91
15th	05 02	2.84
	17 19	2.86
16th	05 37	2.77
	17 50	2.78
24th	01 04	2.84
	13 29	2.90
25th	01 58	3.00
	14 15	3.10
26th	02 48	3.12
	14 58	3.25
27th	03 38	3.18
	15 41	3.32
28th	04 26	3.18
	16 23	3.32
29th	05 13	3.11
	17 04	3.24
30th	06 01	2.99
	17 46	3.10
31th	06 50	2.82
	18 30	2.92

Spring Tides Tables are provided by the Maritime Administration Department


NEW MOON 12TH PM


FIRST QUARTER 20TH PM


FULL MOON 27TH AM


LAST QUARTER 04TH PM

LUNAR CALENDAR FOR OCTOBER, 2015

Agricultural Review for October, 2015

Regionally, dry conditions were experienced for the month of September.
There were no reports of significant effects of the weather on Agricultural production.

Farmer's Note for October, 2015

Guyana is in its secondary dry season of 2015. Generally for the month of October dry conditions is expected over most parts of the country. Thus, farmers are advised to take the following precautions;

- Provide shade for plants that cannot withstand high temperatures and excess sunlight.
- Shade should be provided for animals, so as to minimize heat stress.
- Mulch crops, so that the soil moisture can be retained to maintain healthy crop growth.
- Transplanting should be done early in the morning and late in the afternoon.
- Farmers should take steps to conserve and prevent any wastage of irrigation water.
- Plant warm season vegetables that can withstand the dry periods such as; tomato, pepper, cucumber, ochro, watermelon, pumpkin, sweet potato etc.
- When debeaking and administering any form of drugs to your animals, it should be done early in the morning to prevent heat stress which aids in decreasing the mortality rate.
- Effective pasture management should be executed during this period.
- Farmers and other stakeholders should take this opportunity to clean drains,trenches , canals etc, in anticapitation for the upcoming Secondary Wet season.

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Crop Of The Month: Peanut | October,2015

Common Name: *Peanut/Groundnut*

Scientific Name: *Arachis hypogea L*

Temperature:*22-27o C*

Soil pH: 5.5- 7.0

Introduction

The peanut is an annual herbaceous plant that grows to a maximum height of 60 cm. It is characterized by bearing of fruits that develop and mature underground. Fertilization of the ovary results in the development of an elongated stalk (peg) which grows downwards and carries the ovary into the soil to a depth of 2-7 cm. Pegs can attain a length of 15-30 cm.Peanut or groundnut (Arachis hypogea L.), a member of the legume family, is an important food and oil crop. It is currently grown on approximately 42 million acres worldwide. It is the third major oilseed of the world after soybean and cotton (FAO, 1990).The most suitable areas for peanut production are the Rupununi Savannahs, Intermediate Savannahs, North West District (Wauna, Yarakita and Paruima), the Linden Highway, Upper Demerara and Upper Berbice Rivers.

Rainfall requirements

Peanuts are adapted to a wide range of climatic conditions. They are relatively drought tolerant and require about a minimum of 400 mm rainfall during the growing period. For optimum growth, however, an annual rainfall range of 750-1250 mm is generally considered necessary.

Soil requirements

Well aerated and contain moderate amounts of organic matter. The peanut seed has a high demand for water during germination. For optimum germination, high soil moisture is required to facilitate the 35-40% water intake by imbibing seeds. Seeds should be planted when moisture levels are favourable for rapid germination and growth. Rapid germination and vigorous growth help the young plant to counteract diseases.

Planting

Crop rotation practices are recommended with non-leguminous crops e.g. corn and sorghum. This would reduce the pest and disease build up problems associated with prolonged monocropping.

Health Benefits of Peanuts

- **Peanut kernels are good source of dietary protein.**
- **Have protective function against cancers, heart disease, degenerative nerve disease, Alzheimer's disease, and viral/fungal infections.**
- **Contribute to brain health and blood flow to brain**
- **Help to prevent coronary artery disease and stroke risk by favoring healthy blood lipid profile.**
- **Reduce the risk of stomach cancer by limiting formation of carcinogenic nitrosamines in the stomach.**

Insect Pests and diseases

- **Thrips**
- **Peanut Root-Knot Nematod**
- **Southern Blight**
- **Peanut Rust**
- **Pod Rot**

Recommended Varities

- **Florunner**
- **Guyana Jumbo**
- **C99R**
- **AK 62**
- **Basanti**
- **GN 94-A2**

Harvesting/Storage

Peanuts are harvested mainly by hand (manually) (Figure 10). It is important to harvest peanuts at the right time since this is important for determining nut quality. Too early a harvest results in pod loss, and late harvest may result in fungal infestation. Peak maturity can be assessed by inspection of: (a) The haulms – lower leaves die and fall off. (b) Pods – (i) the shell hardens and the rib on the outer surface can be easily seen. (ii) the shell is thin and can be split easily. (c) The seed coat darkens in colour – immature ones are white or pale pink. Peanuts should be picked at an average kernel moisture content of 18-25 %. Care should be taken to avoid damaging the pods during harvest Broken and rotted pods should be removed at once. Where harvesting is done under wet conditions, the pods should be picked from the plants within 3 days and sun dried in shallow layers. Peanuts generally mature within 90-120 days depending on the variety..

Fun Facts About Peanuts

- **Peanuts increase your libido. Most people do not know that argentine, the main ingredient in Viagra, is abundant in peanuts.**
- **As of 2006, China is the world?s largest peanut producer.**
- **If you favor cheese over peanut butter, it is said that peanut butter is good to catch mice.**
- **The World Health Organization, under the name ?Plumpy'nut?, provides two small bags of 100 gr. per day as a surviving base to starving children in Africa.**

THE HYDROMETERORLOGICAL SERVICE OF GUYANA

18 Brickdam Stabroek
Georgetown, Guyana

E-mails:

d.david@hydromet.gov.gy
dwayne .lanferman@yahoo.com

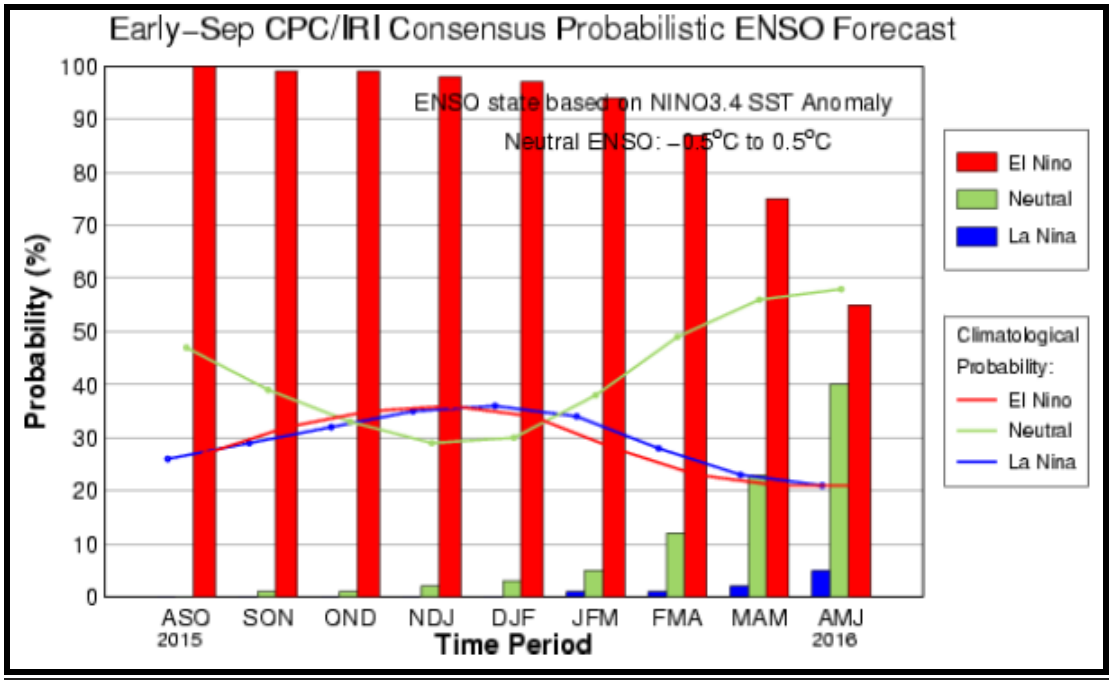
Phone : 592-261-2284
592-261-2216
(24 hours National Weather Watch Centre numbers)
Or
Visit our Website:
www.hydromet.gov.gy

El Niño Update

ENSO Alert System Status: El Niño Advisory

- **El Niño conditions are present.***
- Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean.
- There is an approximately 95% chance that El Niño will continue through Northern Hemisphere winter 2015-16, gradually weakening through spring 20..

Table #6: CPC/IRI Early-Month Consensus ENSO Forecast Probabilities



El Niño Facts

- El Niño is associated with a drier wet season.
- If El Niño manifests, less water will be stored during the wet season.
- By consequence, less water would be available for use in the dry season.

CONSERVE WATER !