



Guyana Farmer's Forum

Report

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I. INTRODUCTION

The Guyana Farmers' Fora meetings were held on the 17th and 18th of October at the Ministry of Agriculture, 18 Brickdam, Starbroek, Georgetown and The Regional Chairman Office Board room, Anna Regina, Essequibo Coast, respectively.

The purpose of the forum was to help farmers become more self-reliant in dealing with weather and climate issues that affect agricultural production on their farms. The overall goal of the farmers' forums is to secure farmer self reliance, through helping them to be better informed about effective weather and climate risk management by sustainable use of natural resources for agricultural production.

II. REPRESENTATION

The meetings were attended by farmers, agricultural officers, meteorological personnel and two representatives of the CAMI project.

(See full list of attendees at **Annex 1**).

III. WELCOME

Participants were welcomed by Mr. Garvin Cummins, Deputy Chief Hydro-Meteorological Officer. Mr. Cummins indicated that they would like to get critical feedback from farmers and as long as both the Service and the farmers work together they could build a more sustainable society. He admits that although the information that has been supplied to the farmers has not been the best, the forum would help to make information more user-friendly. To this end, farmers would be able to make proper decisions, improve farming practices and thereby improve productivity.

Mr. Adrian Trotman, CAMI Project Coordinator, expressed his gratitude at being with the farmers and agriculturalists. He emphasized that weather and climate plays an important role in the development of plants and suggests that one can take advantage of climate and climate-related information to make better decisions. He also urged that the farmers should make their needs known to their Hydro-Meteorological Service so as to make way for improving their relationship.

The Permanent Secretary of the Ministry of Agriculture, Mr. G. Garvis also gave remarks (on the 17th October) on behalf of the Minister of Agriculture. He apologized for the Minister's absence and welcomed all participants and invited guests to the forum. He alluded to the fact that the CAMI project is in collaboration with their Hydromet Service and the Caribbean Institute for Meteorology and Hydrology (CIMH), and would lend towards government's efforts to provide timely information to farmers.

IV. PRESENTATIONS

The CAMI Project – Shontelle Stoute, Technical Assistant (CAMI Project)

The CAMI project is funded by the European Union's ACP Science and Technology Programme. It is a partnership between CIMH, the World Meteorological Organization (WMO), the Caribbean Agricultural Research and Development Institute (CARDI) and ten meteorological services.

The objective of the project is

To increase and sustain agricultural productivity at the farm level in the Caribbean region through improved applications of weather and climate information using an integrated and coordinated approach.

The interpretation and use of rainy season prediction, pest and disease forecasting, newsletters and farmers forums are some of the activities within the project.

At present the project is in its second year having completed stakeholder meetings; training in rainfall analysis, pest and disease modelling, and information publications; as well as some data rescue for use in relevant project applications. The Farmers Forums across the CAMI states are almost completed, with a second round of forums to come in the final year of the project. During the final year there will also be focus on crop simulation models as well as general agrometeorology and irrigation management.

Meteorology in Guyana – Carshena Gordon (Weather Forecaster)

In her presentation Ms. Gordon gave an overview of Guyana's climate, highlighted the affects their weather and climate and extreme weather events, as well as gave an overview of their HydroMeteorological Service.

Guyana, known as the "Land of Many Waters", has an equatorial climate that is characterised by seasonal rainfall, high humidity and small variations in temperature. Weather in Guyana is influenced by the Inter-Tropical Convergence Zone (ITCZ), tropical waves, squall lines, troughs and ENSO events. During a warm phase of an ENSO event, Guyana could experience reduced levels of rainfall, drought, negative agricultural impacts, and an increase in insect pests, diseases and economic decline. However, during the cold phase of an ENSO event the opposite could occur with increased rainfall and flooding likely.

The Guyana Hydro-Meteorological Service is embedded within the Ministry of Agriculture with a mandate to identify and deal with a wide range of weather, climate and water related issues that affect agriculture and social-economic development. With respect to natural hazards, the Service sensitizes the public to the impacts; provide warnings of individual events to preserve life and property and to sustain productivity.

An Explanation of Public Forecast Terms – Moreena Elliot and Satish Nanlall (Weather Forecasters)

In this presentation an explanation of the common meteorological terms was given so that farmers would have a better understanding of the daily weather reports. The two main types of precipitation mentioned were showers and rain. Where a shower is relatively short lived, and rain a more persistent form of precipitation. Classifications of showers include isolated, scattered, localized and widespread. Apart from the types of precipitation, other classifications of precipitation were also explained including, intensity and duration.

Seasonal Forecasts – Adrian Trotman, CAMI Project Coordinator

Mr Trotman noted that there is always uncertainty in early warning. He also gave an overview of the seasonal rainfall produced by CIMH, with some contributions from regional Meteorological Services.

The precipitation outlook is issued in the form of a map of tercile probabilities showing regions having homogeneous forecast probabilities for below, near, and above normal precipitation. The terciles separate the possible outcomes into the three categories based on the historical precipitation record. As expected, the probabilities add up to 100.

Extreme Rainfall – Droughts and Floods – Adrian Trotman, CAMI Project Coordinator

In his presentation Mr Trotman noted that increased rainfall totals have been occurring since May 2011. This increase had already been predicted by CIMH in the Precipitation Outlook. The question to the farmers is “with such prediction what would you have done differently had you been aware?”

Prior to the 2009-2010 drought period it was forecasted below normal rainfall for the Caribbean region and subsequently above normal rainfall was predicted for the latter part of 2010. Many farmers indicated they would have responded differently were they aware of these forecasts.

Climate Trends and Climate Change – Shontelle Stoute, Technical Assistant (CAMI Project)

Mrs. Stoute in her presentation gave a brief outline of the climate of one location in Guyana (Georgetown) with respect to temperature and rainfall.

Global climate models have predicted an increase in temperature from 0.5 to 4.2 °C by the beginning of the 21st century, with an increase in the number of days maximum temperature will exceed 30 °C. However, models are predicting a decrease in rainfall totals and hence a decrease in the amount of available water. Apart from the projected decrease in rainfall totals there is the prediction of an increase in intense rainfall events.

With a closer look at the Caribbean, models have also projected an increase in temperatures with Southern Guyana expected to experience the greatest increase in temperatures. Rainfall models are showing both an increase and a decrease in rainfall totals during certain times of the year.

These predictions were then compared with current temperature and rainfall trends. Results of analyses show that temperatures are on the increase as well as the number of days where the maximum temperature exceeds 30°C. On the other hand rainfall trends show increases and decreases in different months, but they were not statistically significant.

V. OPEN DISCUSSION – CIMH

Participants viewed three short videos from WMO showing:

1. How agricultural information was disseminated via text messaging,
2. Use of weather data and meteorological stations for crop insurance
3. Use of meteorological data and the improved relationship between farmer and meteorologist to promote increased productivity at the farm level

Farmer's Working Groups

In an effort to obtain information on the type of information communicated to the farming community as well as the means of communication and any improvements, several questions were asked. Below are the responses to questions asked in the discussion for the two locations.

Georgetown

1. What information does the Meteorological Service in your country currently/normally provide?
 - a. Weather forecasts (radio, television and newspaper)
 - b. Daily Weather forecasts
 - c. 7-Day weather forecasts
 - d. Climatological forecasts (outlook)

2. What are the key crops in your country?
 - a. Rice
 - b. Sugar
 - c. Cash Crops
 - d. Coconut
 - e. Mango
 - f. Banana
 - g. Plantain

3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?
 - a. Blossoms drop from plants in dry season as well as in the wet season where there is poor drainage
 - b. During the rainy season farmers have to pay more to get their crops transported out from their farms.
 - c. During the dry season also, farmers living in the sandy region have to spend more to get crops transported. When the sand becomes extensively dry it is difficult for the vehicles to get to and fro from the farms.
4. Should the project focus on large or small scale farmers?
 - a. Small farmers should be focused on since the farmers provide crops sustainability and these small farmers have not been targeted in the Meteorological Service. Small scale farmers stand to lose more than if there was to be an extreme weather occurrence that would destroy crops.
5. What additional products would you like to see from your meteorological service?
 - a. Seasonal forecasts
 - b. Two-week forecasts
 - c. Regional forecasts on a monthly basis
 - d. Outreach programs where meteorological service personnel go out to the farmers and provide training to better understand the weather and climate as well as provide climatological outlooks.
 - e. Farmers would like to see the weather forecasts delivered on more television stations
 - f. In the event of adverse weather, there should be warnings sent via telephones and radio stations
6. Which of (5) above do you think can be provided by your meteorological service?
 - a. Given adequate finance all can be provided
7. Preferred means of communication
 - a. Television (during cricket season, soap operas etc.)
 - b. Radio stations
 - c. Mobile phones

Georgetown Discussion / Recommendations

In summary Mr. Trotman stated that one approach to bridging the gap between farmers and meteorological personnel would be to have groups formed within the farming community involving farmers, extension officers and Guyana Hydromet Personnel.

Farmers and extension personnel gave some recommendations as well as queries.

1. Farmers would like to know what crops to plant to meet the amount of water available. It was suggested that a system of agro-climatic zoning be adopted.
2. Most farmers are not familiar with internet technology. It is suggested that more means of communication be employed. Currently information is received via the television station NCN; however, not all farmers have access to this channel.
3. The information communicated to the public must be in a form where the farmers could relate. One farmer stated that he heard the radio program for farmers but did not understand what was being said.
4. Have an intra-agency task force to link agriculture and climate. This would have to be driven at an administrative level and the demand for such an agency must come from the farmers.
5. Climate information needs to be integrated into Guyana's farm school.
6. Currently the extension services have a quarterly discussion where they invite researchers and the pest-board but no HydroMet personnel. The extension services is now committed to developing a policy to involve the HydroMet personnel.

Essequibo Coast

1. What information does the Meteorological Service in your country currently/normally provide?
 - a. Weather forecasts (12hrs, 24hrs, 3days and 7days)
 - b. Climatological data
 - c. Weather parameters
 - d. Monthly weather summaries
 - e. Weather updates and advisories
 - f. Televised forecasts as well as radio

- g. Information on tides
 - h. Meteorological parameters (rainfall, windspeed, temperature, sunshine)
 - i. Water quality information
 - j. River monitoring
2. What are the key crops in your country?
- a. Rice
 - b. Sugar cane
 - c. Cash crops
 - d. Coconuts
 - e. Pineapples
 - f. Citrus
 - g. Ground provisions
 - h. Papaya
 - i. Vegetables
3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?
- a. Flooding: this impacts transportation and also causes damage to produce; causes pests in rice
 - b. Excessive rainfall gives rise to water logged soils, poor pollination/flowering and wilting
 - c. Drought: causes poor yields
 - d. Increase in pests and diseases during the dry season giving rise to loss in production
4. Should the project focus on large or small scale farmers?
- a. Both
 - i. The project should have some focus on small scale farmers since they are the ones more likely to feel the impact of a disaster. For the small farmer, farming is their main source of income and any disaster would not only affect their farms but also their livelihoods.
 - ii. It should also focus on large scale farmers since they would experience the same crop losses as the small scale farmer. Farming and exporting are their main source of income and they also provide employment for lots of people.
5. What additional products would you like to see from your meteorological service?
- a. Handouts/ guidelines on the weather patterns
 - i. Information on related pests and diseases for the different weather patterns

- b. More calendars / pamphlets showing seasonal outlooks
 - c. Providing updates via cell phones (at the right time)
 - d. More often the weather forecasts should be seen on television
 - e. Additional television channel to view weather
 - f. Monthly weather bulletins showing tidal information
 - g. Show seasonal forecasts in the newspaper
 - h. Outreach programs / seminars
6. Which of 5 above do you think can be provided by your meteorological service?
- a. All of the above except that on pests and diseases
7. Preferred means of communication
- a. Cell phones
 - b. Television
 - c. Radio
 - d. High Frequency radio
 - e. Email
 - f. Handouts
 - g. Newspaper (for seasonal forecasts)

Essequibo Discussion/ Recommendations:

1. Longer slot on the radio since more information is needed.
2. The meteorological service should send out a pamphlet showing weather conditions to help farmers make decisions in planting. Farmers at times do not have the time to listen to forecasts thus the farmers would willingly buy these pamphlets.
 - a. The pamphlet should be produced every 10 days.
 - b. Presently there is a yearly HyrdroMet calendar which gives the normal monthly expectations
 - c. Previously there was a monthly weather bulletin which gave a review of the last month and a synopsis of the coming month with advice on planting.
3. Farmers would like to see additional rainfall gauges installed at Mainstay, Copey (other side of Copey Sand Pitt), Paradise (road side) and Dark Mouth

VI. ANNEXES