



Jamaica Farmers' Forum

22nd – 23rd November 2011

Prepared By: Mrs. Shontelle Stoute
Technical Assistant – CAMI Project
CIMH

Caribbean Institute for Meteorology and Hydrology
Husbands
St. James
BARBADOS

This document has been produced with the financial assistance of the European Union. The contents of this document are the sole responsibility of The Caribbean Institute for Meteorology and Hydrology and can under no circumstances be regarded as reflecting the position of the European Union.

Table of Contents

- I. INTRODUCTION..... 3
- II. REPRESENTATION 3
- III. WELCOME..... 3
- IV. PRESENTATIONS 4
 - The CAMI Project – Shontelle Stoute, Technical Assistant (CAMI Project) 4
 - A Review of the Weather Pattern for 2010 – Adrian Shaw (Jamaica Meteorological Service)..... 4
 - Role of the Meteorological Service in Jamaica – Glenroy Brown (Jamaica Meteorological Service) 4
 - Seasonal Forecasts – Adrian Trotman, CAMI Project Coordinator 4
 - Extreme Rainfall – droughts and floods – Adrian Trotman, CAMI Project Coordinator 5
 - Climate Change in Jamaica– Tannecia Stephenson, Climate Studies Group, UWI Mona. (Kingston Meeting) 5
 - Climate Trends and Climate Change – Shontelle Stoute, Technical Assistant (CAMI Project)(Mandeville Meeting)..... 5
- V. OPEN DISCUSSION – CIMH 6

I. INTRODUCTION

The Jamaica Farmers' Forum meetings were held on the 22nd and 23rd of November at the Forestry Department, Kingston and The Regional Agricultural Agency (RADA), Mandeville 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.

(Link to generic agenda)

II. REPRESENTATION

Attendees included farmers, extension officers, other agricultural officers and officials; and a representative from Caribbean Agricultural Research and Development Institute (CARDI).

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

III. WELCOME

Participants were welcomed by Ms. Jacqueline Spence of Jamaica's Meteorological Service. Mr. Evan Thompson of Jamaica's Meteorological Service also welcomed participants at the Kingston meeting. He stated that the met service has a multi-fold interest in the forum one of which is meeting the needs of farmers as well as updating its climate database so that climatological information is available.

Mr. Peter Thompson of RADA welcomed participants and emphasized that agriculture and food security is very important as climate change plays a very important part in it. In his reading, he has learnt that the world population is increasing at the rate of 4 million per year and if we continue along a path without analysing climate change then we run the risk of resources being depleted. Mr. Thompson hopes that farmers would learn a lot during this forum.

Mr. Adrian Trotman (Coordinator, CAMI Project), alluded to the fact that meteorological parameters (water and sunshine) play an important role in growing plants, and climate change has caused policy makers to pay closer attention to the roles weather and climate play in our activity and behaviour.

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, rainfall analysis workshop, pest and disease modelling, training in information publication as well as some data rescue. The Farmers Forums are almost completed and follow up will be done in the final year of the project along with crop simulation models.

A Review of the Weather Pattern for 2010 – Adrian Shaw (Jamaica Meteorological Service)

In his presentation, Mr. Shaw stated that 2010 was a year of extremes. When compared to the 30 year mean (1971 to 2000), rainfall in September 2010 surpassed this by over 200mm. This was the result of 3 weather systems which interacted with each other.

During the 2009-10 Caribbean drought only 4 parishes escaped drought conditions. These were Trelawny, St. James, St. Ann and Portland. However, by September 2010 (the wet phase of the year) all parishes had exceeded the 30 year rainfall mean as a result of the switch from drought to excessively wet conditions.

Role of the Meteorological Service in Jamaica – Glenroy Brown (Jamaica Meteorological Service)

Mr. Brown stated that the major role of Jamaica's Meteorological service is to provide weather information for the island. Within its climate branch rainfall patterns are observed and climate charts are produced.

In his presentation Mr. Brown also gave brief definitions of climate and weather, hurricanes and cyclones.

Seasonal Forecasts – Adrian Trotman, CAMI Project Coordinator

Mr. Trotman showed how seasonal forecasts produced by CIMH can be related to the 2010 scenarios. The seasonal forecast (3 or 6 months) indicates the probability of receiving above normal, normal and below normal rainfall for the forecast periods. These probabilities are determined by the climate signals and what they signify for the Caribbean. It was seen that these forecasts did indicate the drought of 2009-2010 and above normal rainfall during the latter part of 2010.

With respect to 2011, the European Centre temperature forecast predicted above normal temperatures across the island chain for May – July and more so for June – August. They are expected to become more normal November 2011 and February 2012.

Extreme Rainfall – droughts and floods – Adrian Trotman, CAMI Project Coordinator

Mr. Trotman explained that before the 2009-2010 drought, CIMH had already understood the importance of monitoring drought. The Caribbean Drought and Precipitation Monitoring Network (CDPMN) was launched under the Caribbean Water Initiative (CARWIN) in January 2009 with the expectation that it would be fully operational by the end of 2010. Activity for monitoring rainfall began at the regional scale and this had been very successful in detecting the regional drought conditions in 2009-10. However there has been very little success at the national level, with the relevant national agencies finding it very difficult to join forces for such an important activity. He further emphasized that true government efficiency is seen when the national agencies come together for one common cause for the good of the nation, and the purpose of these forums would be to break any such barriers between the meteorological services and agricultural services for the good of the industry and the food sovereignty of CAMI states.

Mr. Trotman also noted, using Standardized Precipitation Index (SPI) graphs, that drought is not a one-time occurrence but had occurred many times in our history.

Climate Change in Jamaica– Tannecia Stephenson, Climate Studies Group, UWI Mona. (Kingston Meeting)

In her presentation Ms. Stephenson described climate change as a shift in the long term climate. She also outlined that Jamaica is expected to see an increase in temperatures, warm days and fewer cool days/nights.

With respect to rainfall, the change in amount and intensity varies across the island and different trends are seen. In observing rainfall extremes, some areas show an increase in heavy rainy days and some show a decrease and in some cases, no change at all. Although there is variation in rainfall the general trend is drying. Also shifts in the growing season are anticipated and most months are expected to see a decrease in rain during the rain-fed growing season.

For sea level rise, predictions show that rising levels are likely to continue as normal.

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

Mrs. Stoute in her presentation gave a brief outline of the global and regional expectations for climate as well as the climate trends for Jamaica.

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 in which the maximum temperature exceeds 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, Regional Climate Models have also projected an increase in warm days and nights with the Northern Caribbean experiencing an increase from approximately 20 to over 80 warm days per year (using a Japanese regional Climate Model) and from 20 to 100-250 warm nights per year. Rainfall models are showing a significant decrease in rainfall throughout the year but especially from March to August.

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. Analysis of warm nights (minimum temperatures above 20 degrees) for Worthy Park shows a decrease rather than the expected increase. On the other hand, rainfall shows variations in trends throughout the year.

V. OPEN DISCUSSION - CIMH

Participants viewed three short videos 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 available from the Meteorological Service as well as the desired means of communication and dissemination of that information and any other types of information required, several questions were asked. Below are the responses to questions asked in the discussion for both locations.

Kingston Meeting

1. What information does the Meteorological Service in your country currently/normally provide?

- a. Weather bulletins on cyclones
 - b. Daily weather forecasts via radio, television and press. This forecast is updated frequently upon the approach of a weather system so that informed decisions can be made.
 - c. Five-day forecasts where the capital and major towns are mainly mentioned in the outlook
 - d. Monthly rainfall summaries
2. What are the key crops in your country?
- a. Banana
 - b. Coffee
 - c. Sugar cane
 - d. Coconut
 - e. Cocoa
 - f. Yam
 - g. Tomatoes
 - h. Irish potatoes
 - i. Cabbage
 - j. Lettuce
 - k. Cucumbers
 - l. carrots
 - m. Pimentos
 - n. Sweet peppers
 - o. Fruit-tree crops
3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?
- a. Flooding and intense rainfall
 - b. Drought
 - c. Pest outbreaks give rise to low yields

- d. High winds
 - e. Too much cloud cover gives rise to fungus
4. Should the project focus on large or small scale farmers?
- a. The project should focus on both large and small scale farmers but more on the small scale farmers since there are large in number relative to the large scale farmers.
5. What additional products would you like to see from your meteorological service?
- a. Once weekly weather forecast geared to farmers so that they can make decisions on their farms.
 - b. 3-month drought forecast
 - c. Soil moisture data
 - d. Explanation of meteorological terms
 - e. Weather updates via cell phones. Both text and voice mail to accommodate those who are illiterate.
 - f. Community radio program
 - g. Forecast for farmers via media
 - h. General email service for farmer groups
 - i. Officers traveling to rural communities along with the extension officer once per quarter.
 - j. Educate the public about the different types of cloud
 - k. Establish a database between RADA and Jamaica's Meteorological Service to provide weather and climatic information to farmers.
 - l. Community based weather stations
6. Which of (5) above do you realistically think can be provided by your meteorological service?
- a. Cell phone weather updates
 - b. Public awareness on cloud types
 - c. Community based weather stations
 - d. Forecast for farmers via media
 - e. Longer forecasts periods

7. Preferred means of communication
 - a. Cell phone – text and audio
 - b. Media
 - c. Internet
 - d. Radio
8. Would you be willing to pay for these means of communication?
 - a. Yes - as long as the information is relevant and reliable a very small annual fee can be paid.

Kingston Discussion / Recommendations

Participants gave some recommendations as well as challenges.

1. Farmers stated that longer forecasts would help them to plan further down the road.
2. Farmers would also like information on soil moisture. (Mr. Trotman stated that the CAMI project would look at this in the coming year with a proposed training session)
3. One of the most frequent weather related impacts is lightning. It threatens lives as well as burns trees and crops.
4. It was also suggested to have more meetings/forums of this nature (a minimum of once per quarter).

Drought is a slow creeping phenomenon. In order to detect its occurrence, climate data should be supported by observations on the ground by persons such as environmental scientists, water resources managers and –of course- farmers. With this, an “Impacts Reporter” is being developed where farmers and other observers can indicate the impacts of extremes of rainfall at their locations. The accumulation of data can also give rise to other research projects.

Jamaica lost much of its historical climate data in a fire in 1992 and part of a recently approved CDB (Caribbean Development Bank) funded project will focus on data collection. Participants are being prompted to reveal any known sources of climate (and hydrological) data.

Mandeville Meeting

1. What information does the Meteorological Service in your country currently/normally provide?

- a. Daily weather forecasts and climate information
 - b. Weather bulletins and advisories
 - c. Provision of data on call
 - d. 3-month forecast on rain and drought provided by the climate branch
 - e. Information for aviation and marine
2. What are the key crops in your country?
- a. Sugar cane
 - b. Banana
 - c. Yam
 - d. Vegetables
 - e. Citrus
 - f. Sweet potatoes
 - g. Irish potatoes
 - h. Cabbage
 - i. Coffee
 - j. Rice
 - k. Condiments
 - l. Pumpkin
 - m. Ginger
 - n. Escallion
3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?
- a. Dry spells. These give rise to pests and moisture loss from the soil and plant
 - b. Wet spells. These give rise to fungal diseases
 - c. Temperature variations affect yields
 - d. High winds affect plants such as banana and Irish potatoes
4. Should the project focus on large or small scale farmers?
- a. Both since they all make up the farming chain and contribute to the G.D.P. of the country.
5. What additional products would you like to see from your meteorological service?
- a. More weather stations in the farming locations
 - b. More thermometers
 - c. Monthly rainfall data showing comparisons with previous years
 - d. Rain forecasts
 - e. Drought forecasts
 - f. Soil moisture information (tensiometer)

- g. Location-specific data
 - h. Audio and text messaging
 - i. Collaboration between RADA and the Jamaica's meteorological Service
 - j. Forecasts targeted to farming areas
6. Which of 5 above do you think can be provided by your meteorological service?
- a. Weather stations
 - b. Thermometers
 - c. Location-specific data
 - d. Text messaging
 - e. Forecasts targeted to farming areas
7. Preferred means of communication
- a. Text messages via cell phones
 - b. Email
 - c. Television
 - d. Radio
8. Would you be willing to pay for these means of communication?
- a. Yes, based on affordability. Some farmers have made a suggestion of \$100 monthly per farmer for the services.

Mandeville Discussion/ Recommendations:

1. Participants would like to see more of these forums