



Trinidad Farmer's Forum (North and South)

2nd - 3rd June 2011

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

Caribbean Institute for Meteorology and Hydrology
Husbands
St. James
BARBADOS

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I. INTRODUCTION

The Trinidad Farmers' Forums took place at the Penal Demonstration Station, **Ramjattan Trace Penal** (South Agricultural District) and RAN Conference Room, Farm Road Curepe (North Agricultural District) on June 3rd and 4th 2011 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 from the South and North Districts, extension officers, other agricultural officers and officials; and a representative from Caribbean Agricultural Research and Development Institute (CARDI) and the Inter-American Institute for Cooperation in Agriculture (IICA).

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

III. WELCOME

Participants, as well as staff of the Caribbean Institute for Meteorology and Hydrology (CIMH) and Meteorological Service were welcomed by a representative from the Ministry of Agriculture to the forum.

Mrs. Arlene Aaron of the Trinidad Meteorological Service also gave warm welcome to the participants and gave a brief outline of the CAMI project.

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, and is a partnership between CIMH, the World Meteorological Organization (WMO), the Caribbean Agricultural Research and Development Institute (CARDI) and the ten meteorological services (including that of Trinidad and Tobago) of the regional participating countries.

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.

Meteorological Data Rescue, rainy season prediction, rainfall and temperature analyses, pest and disease forecasting, production of weather and climate newsletters for farmers and the wider agricultural community, and farmers forums are some of the activities within the project.

At present the project is in its second year having completed stakeholder meetings, workshops in a) rainfall analysis, b) pest and disease modelling, c) information publication as well as some data rescue. The Farmers Forums have now gotten on the way. Training in crop simulation models and irrigation planning will come in the final year of the project.

Weather and Climate of Trinidad and Tobago; Review of 2010 Weather – Trinidad Met Service (Carrie Chapman)

Ms. Chapman differentiated between weather and climate. Trinidad's climate comprises of two seasons with the dry season categorized by warm days (Tropical Maritime Climate) from January to May. The rainy season is characterized by hot humid days and nights, low wind speeds and increased stratified rain (Modified Moist Equatorial Climate) from June to December.

For the agriculturalist there are three meteorological parameters of major importance – rain, temperature and wind.

The weather systems affecting the Caribbean include the Inter-Tropical Convergent Zone (ITCZ), hurricanes, tropical waves, Bermuda Azores High, El Nino/La Nina, North Atlantic Oscillation and Sea Breezes. The EL Nino/La Nina is of great importance since they can bring about changes in rainfall patterns with warm Sea Surface Temperatures (SSTs) during an EL Nino and the opposite holds for the La Nina. The ITCZ causes an increase in thunderstorm conditions.

There was mention of flooding. Flooding can cause great expenditure to a country's budget annually. Some types of flooding include riverine, estuary, coastal and street and or flash, which may be seasonal or sudden.

Ms. Chapman also commented that the rainy season for 2011 began early (19th May) rather than June 1st as normal.

Short Term Weather forecasts, clouds, weather maps and weather forecasting terms – Trinidad Met Service (Aaron Maharaj)

Mr. Maharaj gave an overview of the types of cloud which are generally observed in Trinidad and Tobago and the type of precipitation produced.

He also noted that most times there is misinterpretation of the weather forecast and it may be attributed to the forecasting terms used by the meteorological service. In this respect Mr. Maharaj explained the meaning of various terms used by the meteorological service.

Seasonal Forecasts – Adrian Trotman, CAMI Project Coordinator

Mr. Trotman noted that there is always uncertainty in early warning. He gave an overview of the seasonal outlooks with respect to 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. The probabilities add up to 100. Mr. Trotman also noted that the main outlooks are for a three month period and are produced every two months (therefore having a one month overlap). Beginning 2011, CIMH also provided an descriptive outlook of the climate for six months in advance.

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

In his presentation Mr. Trotman noted that above normal rainfall totals have been occurring since May 2010, which 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?”

Prior to the 2009-2010 drought below normal rainfall for the Caribbean region was also predicted.

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

Mrs. Stoute in her presentation gave a brief outline of the climate of two locations in Trinidad and Tobago (Piarco and St. Augustine) with respect to temperature and rainfall. There is very little variation in temperature throughout the year, however, the dry season is depicted by low rainfall amounts from January to May and the wet season from June to December depicted by higher rainfall levels.

Climate models have predicted an increase temperature from 0.5 to 4.2 °C by the beginning of the 21st century with an increase in the number of days that 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.

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 analyses suggest some decrease in rainfall at times but these are not statistically significant.

Weather, Climate and Pest and Diseases – Adrian Trotman, CAMI Project Coordinator

Mr. Trotman provided a brief summary of the conclusions made by the CARDI entomology specialist Mr. Anil Sinha and the consultant Dr. Simone Orlandini of the University of Florence, Italy. From their conclusions, it was recommended that modelling be done on the following pests/diseases:

Black Sigatoka, Whitefly, Citrus Psylid. It is also recommended that some work be done on soya bean rust, a programme already started at the CARDI unit in Belize.

There are two more pests and diseases meetings left to be done (in St. Vincent and the Grenadines and Antigua and Barbuda) that are expected to show some similarities to those already conducted. This modelling exercise should be seen as illustrative of how weather and climate information can be useful in plant protection.

V. OPEN DISCUSSION – CIMH

Participants viewed three short videos from WMO showing:

- How agricultural information was disseminated via text messaging,
- How weather station data was being used for crop insurance
- The benefits of a good relationship between meteorological personnel and farmers and the use of weather and climate information toward improved livelihoods of farmers.

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:

1. What information does the Meteorological Service in your country currently/normally provide?
2. What are the key crops in your country?
3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?
4. Should the project focus on large or small scale farmers?
5. What additional products would you like to see from your meteorological service?
6. Which of 5 above do you think can be provided by your meteorological service?
7. Preferred means of communication

South Meeting Discussion Summary

1. What information does the Meteorological Service in your country currently/normally provide?
 - a. Daily forecasts
 - b. Aviation
 - c. For farmers upon request
 - d. Climate reports
 - e. Seasonal reports
 - f. Seasonal outlooks to industries

2. What are the key crops in your country?

- | | | |
|------------------|-----------------|-------------------|
| a. Hot peppers | j. Plantain | s. Fisheries |
| b. Sweet peppers | k. Pimento | t. Livestock |
| c. Melon | l. Watermelon | u. Aquiculture |
| d. Tomatoes | m. Cucumber | v. Apiculture |
| e. Pumpkin | n. Cabbage | w. Citrus |
| f. Cocoa | o. Bodi | x. Dasheen leaves |
| g. Cassava | p. Sweet potato | y. Pineapple |
| h. Coconut | q. Orcho | |
| i. Banana | r. Pawpaw | |

3. What do you see as frequent /costly impacts related to weather and climate that we have within our farming system?

- Floods – erosion
- High winds
- Dry weather/drought
- Bush fires
- High humidity – costly due to specific disease and insect
- Heavy showers – large droplets damages flowers and fruits. Also affects apiculture.
- Excessive rainfall – fungicides
- High temperatures – flowers and fruit drop, cracks, increase in insect population, leaf spots.

4. Should the project focus on large or small scale farmers?

All farmers

5. What additional products would you like to see from your meteorological service?

- a. Segment targeting agriculture – drought conditions, abnormal rainfall etc.
 - b. Specific season forecast for agriculture
 - c. Quarterly outlook geared to the farming community for planning purposes
 - d. Bill boards with information on weather
 - e. Liaise with water resources to know how much water is available.
6. Which of 5 above do you think can be provided by your meteorological service?
- a. All of above
 - b. Segment targeting agriculture
 - c. Specific season forecast for agriculture
7. Preferred means of communication
- a. Ministry website
 - b. SMS
 - c. Farmer groups
 - d. Media
 - e. Access to meteorological website
 - f. Electronic billboards
 - g. Extension advisory service to distribute information
 - h. Morning and evening news
 - i. Newspapers
 - j. Radio

North Meeting

1. What are the key crops in your country?
 - a. Sweet potatoes (main staple)
2. What additional products would you like to see from your meteorological service?

- a. Research
 - b. Daily forecasts specific to farmers
 - c. Forecasts specific to farmers – 6 months or quarterly predictions
3. Preferred means of communication
- a. Text messaging
 - b. Radio forums
 - c. Email
 - d. Send information to extension services so that this information can then be passed on to the farmer
 - i. Meteorological service can email information to the county offices and the farmer can obtain information this way
 - e. Newsletters (quarterly)

Discussion:

- One of the major factors farmers face is destructive weather patterns
 - o They need to be sensitized on weather patterns
- The indicators which farmers normally use are becoming confusing to them as changes in the climate occur.
- There is a missing link with respect to strategies to overcome information as there is a lack in the research in Trinidad and Tobago. Farmers are not getting the help they need from research (if research is being done they are unaware of it). On the other hand, personnel from the Ministry of Agriculture stated that research is being done however, it is very time consuming especially while they are facing the challenge of being understaffed.
- Beginning October 2011, regional farmers and agricultural ministries would have a meteorological bulletin tailored specially for them.

Suggestions:

- More trained agro-meteorological personnel in the meteorological service
- An organization for farmers/producers be established to provide a voice for all
- Set up a farmer/producer committee to lobby to drive policy makers to make decisions
- Have an umbrella body that represents all of the farmer's associations/organizations of Trinidad and Tobago and approach the European Union for funding to provide resources for research, finance, technological advice, crop insurance etc.
- Crop Programming – when/what or what type of crop to plant based on the climate patterns/forecasts
- Crop insurance

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