# Caribbean AgroMeteorological Initiative (CAMI)

## An International Training Program on DSSAT

### Assessing Crop Production, Nutrient Management, Climate Risk and Environmental Sustainability with Simulation Models

### University of Georgia, Griffin Campus, USA

### May *14th-19th 2012*

This training program was attended by two persons from the CAMI project as well as one person from The Caribbean Agricultural Research and Development Institute (CARDI) to further improve the skills acquired from previous training in January 2012. Training took place at the University of Georgia, Griffin Campus, USA with trainers:

- Ken Boote, Agronomy Department, University of Florida
- Gerrit Hoogenboom, AgWeatherNet, Washington State University
- Jim Jones, Agricultural and Biological Engineering Department, University of Florida
- Cheryl Poter, Agricultural and Biological Engineering Department, University of Florida
- Uprendra Singh, International Centre for Soil Fertility and Agricultural Development

The overall goal of the training was to familiarize participants with a comprehensive computer model for the simulation of crop growth and yield, soil and plant water, nutrient and carbon dynamics and their application to real world problems. The program focused on the following areas:

- Operation of the Windows-based Decision Support System for Agrotechnology Transfer (DSSAT) version 4.5 software (www.DSSAT.org)
- Description of the DSSAT-Cropping System Model (CSM) and its modules such as CROPGRO and CERES and the science embedded in the models
- Minimum data requirements and experimental data collection for systems simulation
- Integration of crop simulation models with data base management and Geographical Information Systems.
- Application of the DSSAT-CSM model to improve management of cropping systems.

Participants were given a practical approach for simulating the effects of soil, weather and management factors on crop production. The process of crop growth and development, water use, uptake of water and nutrients and carbon dynamics simulations were demonstrated. The description procedures for collecting and managing crop, weather and soil data for model evaluation will be useful when applying the model to our region. There were also many hands-on sessions where participants worked with the model.

At the end of the training participants were presented with a Certificate of Achievement.