

## **Eighteenth Open Forum on Crop Modeling and Decision Support Systems**

Sponsored by the DSSAT Foundation



ASA-CSSA-SSSA 2014 Annual Meetings, Long Beach, California

**Date/time:** Mon., 3Nov. 7:30-9:00 PM **Location:** Renaissance Long Beach, Ren. Ballroom II

([scisoc.confex.com/scisoc/2014am/webprogram/Session13801.html](http://scisoc.confex.com/scisoc/2014am/webprogram/Session13801.html))

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### **Introductions and Explanation**

- People present themselves and their interests
- Open Forum explained

### **DSSAT Foundation & ICASA**

- ICASA dissolution, 2014
- The DSSAT Foundation update ([www.dssat.net](http://www.dssat.net))
- New Logo

### **People**

- Special recognitions and announcements

### **Recent Meetings & Workshops/Publications**

- DSSAT Training
  - DSSAT 2014, May, Griffin, Georgia, USA - 57 participants, 22 countries
  - DSSAT Training for Agricultural Economists, AGRODEP/IFPRI, Dakar, Senegal, April, 2014
  - DSSAT Training @ Chiang Mai University, TICA, 19 participants, 11 countries
- AgMIP
  - Wheat modeling @ Clermont-Ferrand, France.
- CIMSANS
  - Improving Food System Sustainability Modeling Workshop, September 11-12
    - <http://www.ilsa.org/ResearchFoundation/CIMSANS>
  - Modeling-related proposals for data harmonization, human nutrition, sustainability
- Environmental Modeling & Software Special Issue, Vol 1 in press
  - “Agricultural systems modelling and software: current status and future prospects”

### **Upcoming Events**

- DSSAT Training planned for 2015
  - DSSAT 2015 @ UGA, Griffin, Georgia, USA, May 18-23, 2015
  - ICRISAT, March, 2015 (?)
- Other meeting or workshops
  - BSSG (postponed from 2014)?
  - AgMIP
    - Pest and Disease Workshop, Feb 23-15, 2015
    - 5<sup>th</sup> Global Workshop, Feb. 25-28, 2015
  - Field Phenomics: Maricopa, AZ, March 16-19, 2015 ([www.fieldphenomics.org](http://www.fieldphenomics.org))
  - Others?

### **DSSAT/CSM Open Source**

- GitHub ([www.GitHub.com](http://www.GitHub.com))

### **DSSAT Development Sprint**

- Major review/effort to improve tools and models, including handling of new crops, energy balance, structured evaluations, etc.
  - IFDC, Muscle Shoals, AL; March 24-28, 2014
  - IFPRI, Washington, DC; Dec. 1-5, 2014
  - Future Sprints in 2015

## Activities

- Ag Model Intercomparison and Improvement Project (AgMIP; [www.AgMIP.org](http://www.AgMIP.org))
  - Wheat, maize, rice, potato and other model comparisons (Boote)
  - Soils (Basso)
  - C3MP (Coordinate Climate-Crop Modeling Project)
  - CTW (CO<sub>2</sub>, Temperature, Water; Jones, Boote, White)
  - IT Tools (Porter, Jones, White)
- CIMSANS (Center for Integrated Modeling of Sustainable Agriculture & Nutrition Security)
  - ILSI Research Foundation (International Life Sciences Institute)
  - Modeling initiative ([www.ilsil.org/ResearchFoundation/CIMSANS/](http://www.ilsil.org/ResearchFoundation/CIMSANS/))
  - Major corporations are supporting
- Data standards and data interchange
  - The ICASA Version 2.0 Data Standards, White et al. (2013). Computers and Electronics in Agriculture 96(1):1-12.
  - ICASA/AgMIP – The standards developed for ICASA have been adapted by AgMIP with emphasis on improving metadata. Demand for sub-daily resolution.
  - GRACEnet database – The USDA ARS network for greenhouse gas research has developed a database which has similarities to the ICASA database and is expressly for modeling.
  - Tri-Society Data Standards Committee ACSESS201.1 – report from 2 Nov. meeting
- Climate Change, Agriculture and Food Security (CCAFS)
  - CRAFT (CCAFS Regional Agricultural Forecasting Toolbox)

## DSSAT 4.X

- DSSAT home ([www.dssat.net](http://www.dssat.net)). Check here for news of meetings, to post queries, etc.
- The current release is downloadable from the web at no charge
  - Reached 5000 downloads on 19 Oct 2014
  - Top ten countries (of over 150): USA (706), China (495), India (471), Pakistan (302), Argentina (273), Brazil (269), Thailand (122), Philippines (118), Peru (108), Germany (93)
- Ongoing work, new features include:
  - Cassava – T. Hunt & CIAT
  - New crops – canola, camelina
  - Sunflower – K. Boote
  - New modules – S. Asseng Nwheat model, ORYZA model, SALUS, AgMaize
  - Energy balance – University of Florida and USDA-ARS ALARC

## Software & data news

- Soil
  - WISE Version 1.1 soil data base with 3,404 profiles available
  - WISE Version 3.1 soil data base with 9,613 profiles available shortly
  - AfSIS soil data base for Africa; 3,655 profiles from WISE Version 3.1 & 4,773 new Africa profiles, total 8,428
- NASA/POWER datasets ([power.larc.nasa.gov](http://power.larc.nasa.gov))
  - 1 degree grid for solar and 0.5 degree grid for temperature
  - Discontinuity in solar data (see warning on web site)
  - Higher resolution, better algorithms in beta testing
- MarkSim GCM
  - Daily weather generated from multiple GCMs
  - <http://ccafs.cgiar.org/marksimgcm#.VEhURMm26is>
- Monsanto trial data to AgMIP data

## Discussion

- Feedback and discussion
- Future