

Seventeenth Open Forum on Crop Modeling and Decision Support Systems

Sponsored by the DSSAT Foundation

ASA-CSSA-SSSA 2013 Annual Meetings, Tampa, Florida, USA

Date/time: Mon., 4 Nov. 2013, 7:30-9:00 PM **Location:** Tampa Convention Center, Room 21

Introductions and Explanation

- People present themselves and their interests
- Open Forum

DSSAT Foundation & ICASA

- Status of ICASA
- The DSSAT Foundation update

People

- Paul Wilkens
- Others

Recent Meetings & Workshops/Publications

- DSSAT45 training:
 - February, 2013. DSSAT Training @ Chiang Mai University, sponsored by Thailand International Development Cooperation Agency (TICA) - 27 participants, > 14 countries, fully sponsored
 - DSSAT 2013, May, Griffin, Georgia, USA - 53 participants, > 13 countries; shorter format @ 6 days
- AgMIP
 - Code sprint with iPlant. Feb. at Texas Advanced Computing Center
 - Multiple Crop Model Training Program on APSIM and DSSAT, March, Kathmandu, Nepal & ICRISAT, India
 - Wheat modeling. June, CIMMYT
 - Global AgMIP, Oct., New York
- EM&S thematic issues
 - “Agricultural systems modelling and software: current status and future prospects
 - Applications
- Scientia Agricola (Brazil) special issue on crop modeling (G Hoogenboom)

Upcoming Events (details at www.DSSAT.net)

- DSSAT training planned for 2014:
 - February, 2014. DSSAT Training at CMU, Thailand, 17 participants will be fully funded by TICA
 - May, 2014 DSSAT 2014 @ UGA, Griffin, Georgia, USA
 - Africa, DSSAT Training sponsored by African Growth and Development Policy (AGRODEP) Modeling Consortium
- DSSAT developers meeting
 - Major review/effort to improve tools and models
 - Muscle Shoals AL, early 2014
 - Limited space so contact G Hoogenboom
- Other meeting or workshops
 - BSSG (postponed from 2013)
 - Field Phenomics: Maricopa, AZ, April 7-10, 2014 (www.fieldphenomics.org)
 - Others?

Activities

- Ag Model Intercomparison and Improvement Project (AgMIP) – C. Rosenzweig, J. Jones, J. Hatfield

- wheat, maize and rice model comparison (Asseng, Boote)
- soils (Basso)
- C3MP (Coordinate Climate-Crop Modeling Project)
- CTW (CO₂, Temperature, Water; Jones, Boote, White)
- IT Tools (Porter, Jones, White)
- iPlant -- <http://iplantcollaborative.org/>
 - iPlant has been extended.
 - Links of “systems biology” type modeling to crop modeling has not progressed.
 - Super-computer access available at no charge. K Thorp interface for CSM using Linux.
 - Phenotyping as the next frontier.
- 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.
 - USDA ARS “big data” initiative—workshop in Feb., but no major action afterwards
- Climate Change, Agriculture and Food Security (CCAFS)
 - CRAFT (CCAFS Regional Agricultural Forecasting Toolbox)
- CIMSANS (Center for Integrated Modeling of Sustainable Agriculture & Nutrition Security)
 - ILSI Research Foundation (International Life Sciences Institute)
 - Modeling initiative (www.ilsf.org/ResearchFoundation/CIMSANS/Pages/HomePage.aspx)
 - Major corporations are supporting

DSSAT 4.X

- DSSAT home (www.dssat.net). Check here for news of meetings, to post queries, etc.
- The current release is downloadable from the web at no charge (> 3,150 downloads)
- Ongoing work, new features include:
 - Cassava – T. Hunt & CIAT
 - New crops – canola, camelina
 - Sunflower – K. Boote
 - New modules – S. Asseng wheat model, ORYZA model
 - Energy balance – University of Florida and USD-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)
 - 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
 - www.ccafs.cgiar.org/marksimgcm#.UmnV4RAIhsA
- Monsanto trial data to AgMIP data

Discussion

- Feedback and discussion
- Future