



8th DSSAT Development Sprint
Hosted by
Institute for Sustainable Food Systems
& Agricultural and Biological Engineering Department
University of Florida

January 8-12, 2018

122 Frazier Rogers Hall

Breakout rooms 185 [ISFS], 201 [except Mon am & Tues am], 120B [except Mon, Tues & Fri]

<https://sites.google.com/site/dssatdevelopmentsprint/home>

Goals:

1. Improve DSSAT, the Cropping System Model and associated tools, application programs, and data bases
2. Provide a forum for communications and information exchange among developers, users and others interested in modeling and decision support systems
3. Entrain new developers in DSSAT protocols and methods

Participants:

- Senthold Asseng, Ken Boote, Cheryl Porter, Vakhtang Shelia, Meng Zhang, Yujing Gao, Willingthon Pavan, Patricia Moreno, Si Mokrane Siad, Chris Villalobos, Kelly Morgan, Jose Guarin, Kirsten Paff, and Gerrit Hoogenboom, University of Florida
- Jeff White, Bruce Kimball, and Kelly Thorp, USDA-ARS, Maricopa, AZ
- Gail Wilkerson and Greg Buol, North Carolina State University
- Bill Batchelor, Auburn University
- Montse Salmeron, University of Kentucky
- Phil Alderman, Oklahoma State University
- Prem Woli, Texas A&M University
- Tony Hunt, University of Guelph
- Santiago Cuadra, EMBRAPA, Brazil
- Jon Lizaso, Universidad Politécnica de Madrid, Spain
- Myriam Adam, ICRISAT & CIRAD
- Daniel Amariles, CIAT, Colombia
- Diego Pequeno, CIMMYT, Mexico
- Jawoo Koo, IFPRI, Washington, DC
- Matthew Jones, SASRI, South Africa

DSSAT Foundation & University of Florida

Top 11 Priorities

- Improve model performance, including cassava, millet, maize, cotton, wheat, sugarcane, sugarbeet, forages, tef, pineapple, others
 - Daniel, Patricia, Myriam, Ken, Prem, Jon, Gail, Greg, Tony, Matthew, Diego, Montse, Phil, Senthold, Kirsten, Cheryl, Gerrit
- Resolve canopy temperature problems and begin testing
 - Bruce, Ken , Santiago
- Implement new ASCE ET routine
 - Kelly Thorp, Ken, Cheryl, Gerrit
- Evaluate linkages with pest and disease models
 - Willingthon, Bill, Ken, Tony, Gerrit, Cheryl
- Evaluate linkages with others models, including livestock using different approaches
 - Willingthon, Prem
- Develop and test a strategy for new crop implementation in DSSAT and CSM
 - Vakhtang, Jeff, Gerrit, Ken, Cheryl
- Review progress on robust testing platform
 - Marcio, Willingthon, Cheryl, Jeff, Vakhtang, Si Mokrane, Gerrit
- Develop model flexible I/O
 - Willingthon, Cheryl, Gerrit
- Review generic species options and growth stages (GRSTAGE.CDE)
 - Jeff, Tony, Willingthon, Cheryl, Ken, Gerrit
- 2-D Soil & Root model
 - Meng, Cheryl, Kelly Morgan, Ken, Gerrit
- Optimization and calibration
 - Phil, Ken, Yujing, Tony, Gerrit



Breakouts (others as needed)

Pest and disease modeling

Energy balance

ET routine

Forage & livestock modeling

CropTest

Generic species/growth stages

Flexible I/O

Cotton data and modeling

Gene-based modeling

Climate data in weather file (TAV & TAMP)

Soybean physiology

Web portal, documentation and publications

	Breakout Rooms			
	122	201	120B	185/ISFS
Mon am		NA	NA	
Mon pm				
Tues am		NA	NA	
Tues pm			NA	
Wed am				
Wed pm				
Thurs am				
Thurs pm				
Fri am			NA	
Fri pm			NA	



Agenda

Monday, January 8, 2018

- 08:30 Welcome – Dr. Dorota Haman, Chair, ABE Department
- 08:45 Background
- DSSAT Development Sprints: Past, Current & Future – Gerrit Hoogenboom
- 09:00 Introduction
- Contribution: Why, What & How – Each participant
 - Review of Agenda – Gerrit Hoogenboom
- 09:45 Logistics
- 10:00 Break
- 10:30 Version Control: Review – Chris Villalobos
- 11:00 GIT Version Control: Hands-on training – Chris Villalobos, Daniel Amariles, & Cheryl Porter
- 12:00 Lunch
- 13:00 Split into teams and begin work
- 15:00 Break
- 17:00 Adjourn

Tuesday, January 9, 2018

- 08:00 Presentation 1 (Jawoo Koo – CGIAR Platform for Big Data in Agriculture)
- 08:20 Presentation 2 (Willingthon - Coupling DSSAT and Generic Disease Models)
- 08:40 Presentation 3 (Kelly Thorp - ASCE method for estimating reference evapotranspiration)
- 09:00 Resume work in teams (break 10:00 – 10:30)
- 12:00 Lunch
- 13:00 Resume work in teams (break 15:00 – 15:30)
- 17:00 Adjourn



Wednesday, January 10, 2018

08:00 Presentation 4 (Gail Wilkerson –Cotton field data for model improvement)

08:20 Presentation 5 (Matthew Jones – Update on the CANEGRO sugarcane module)

08:40 Presentation 6 (Senthold Asseng – Simple modeling approach)

09:00 Teams report back

- What was accomplished yesterday?
- What were the problems, if any?
- What do we need to work on today?
- Group discussion on problem solving, if appropriate.

09:30 Resume work in teams (break 10:00 – 10:30)

12:00 Lunch

13:00 Resume work in teams (break 15:00 – 15:30)

17:00 Adjourn

Thursday, January 11, 2018

08:00 Optional Presentation 7 (Patricia Moreno – Update on the Yucca cassava module)

08:20 Optional Presentation 8

08:40 Optional Presentation 9

09:00 Teams report back

09:30 Resume work in teams (break 10:00 – 10:30)

12:00 Lunch

13:00 Resume work in teams (break 15:00 – 15:30)

17:00 Adjourn

18:00 Group Dinner @ Chopstix Café, 3500 SW 13th Street



Friday, January 12, 2018

08:00 Resume work in teams

10:00 Break

10:30 Final report back and discussion

- Work accomplished
- Work remaining
- Potential publications
- Timeline for finishing

12:00 Adjourn