



International Consortium for Sugarcane Modelling

**Minutes of the meeting held at the University of Georgia Experiment
Station, Griffin, Georgia, USA Friday 23rd May 2008**

Present:

- **Chairman:** Jim Shine – Sugar Cane Growers Cooperative , Florida, USA
- **Secretary / Vice-Chairman:** Graham Kingston - BSES Limited, Australia
- **Treasurer:** Maurits van den Berg – South African Sugarcane Research Institute
- Ryan Viator – USDA ARS, Louisiana, USA
- Simbarashe Chinorumba – Zimbabwe Sugar Association Experiment Station
- Luis Perez – University of Puerto Rico
- Fábio Marin - EMBRAPA, Brazil
- Raul Perdomo - Florida Crystals Corporation, USA
- German Montes - Florida Crystals Corporation, USA
- Gerald Powell - Florida Crystals Corporation, USA
- Jim Jones - University of Florida, USA
- Ken Boote - University of Florida, USA
- Cheryl Porter - University of Florida, USA
- Fred Royce - University of Florida, USA
- Gerrit Hoogenboom - University of Georgia, USA
- Michiel Smit - South African Sugarcane Research Institute
- Jean-François Martiné – CIRAD, Reunion

1. Call to order

Chairman J Shine called the meeting to order at 13:40 and welcomed members and observers to the meeting.

2. Attendance and establishment of a quorum

The 17 attendees included representatives from five of the member agencies, thus establishing a quorum.

The Chairman noted interest from EMBRAPA and the University of Puerto Rico in joining ICSM as members. Luis Perez indicated that University of Puerto Rico would join and Fábio Marin was to seek approval from EMBRAPA.



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3. Review of 3rd August 2007 business meeting and Minutes

The Chairman gave a short period for review of minutes from the 2007 meeting at SASRI. A motion for acceptance of the minutes was moved by S Chinorumba and seconded M van den Berg – the motion was carried. There was no business arising from the minutes.

4. Treasurers report

The cash balance in the bank statement was ZAR45,490.45 (~USD6,100) to 30th April 2008. The Treasurer indicated there was a ZAR200 difference between the statement and his own records which was still to be explained. The balance included all payments associated with the DSSAT CANEGRO project, but did not include any transactions associated with the current workshop / meeting. J Shine indicated income from ICSM workshop / meeting registrations was USD2,200 and a surplus of \$300-400 was likely. The chairman asked for a motion that any surplus be transferred to the University of Georgia in recognition of the support provided in organizing of the meeting and provision of the venue. Moved G Kingston, seconded M Smit. Approval of the motion was moved by M van den Berg and seconded S Chinorumba. The motion was carried.

Invoices for 2007-08 membership fees had been distributed.

5. Discussion of Concept Proposals

5.1 Creation and model-wise exploration of an international sugarcane growth monitoring dataset

This project concept was aimed at creation and model-wise exploration of an international dataset from uniformly managed and analysed sugarcane growth monitoring trials, concerning a common set of varieties (one variety per ICSM member participant) grown in different countries. The discussion group noted breeding programs with an international variety collection as sources of clones for the trials to preclude drawn out exchanges through quarantine procedures, the likely range of plant and environmental measurements required and issues of standardisation of data collection and recording. G Kingston was asked to collate responses from interested parties with regard to varieties held in breeding collections to guide selection of a short list of common varieties. This information was required by 30th June 2008 to enable preparation of a first draft of a project proposal by 1st November 2008. G Kingston, M van den Berg and R Viator will liaise for this process and M Smit will circulate a document to initiate discussion of data collection standards. R Viator was to suggest data recording procedures.



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ICSM adoption of this concept proposal and indicated actions was moved by J-F Martiné and seconded by L Perez. The motion was carried.

5.2 Incorporating SASRI trash model into DSSAT CSM

The CANEGRO sugarcane model lacks support for nutrients and trash blankets. DSSAT CSM supports nutrient flows in the soil, and from mulch (trash), but does not model the physical affects of mulch (rainfall and light interception, soil evaporation and temperature effects). The SASRI trash model simulates the physical effects of trash but does not simulate nutrients (soil temperature routines require improvement and frost impact is not addressed). The SASRI trash model could be incorporated into DSSAT-CANEGRO in the DSSAT CSM.

This proposal was discussed in parallel with the need to develop a crop nitrogen module for both DSSAT-CANEGRO and CASUPRO models. M van den Berg and C Porter were to discuss current status of the SASRI model and the scope of the task for incorporation into DSSAT CANEGRO and to report to ICSM by 15th July on the feasibility options for the project. Adoption of the concept project was moved by G Kingston and seconded by M Smit. The motion was carried.

5.3 Developing an N module in DSSAT CANEGRO and CASUPRO

Options for this activity included “simple” or more complex approaches, the latter was thought to be more compatible with both models. K Boote, C Porter and M van den Berg will discuss options in Gainesville on 27th May 2008 to allow preparation of a recommendation by 15th July 2008 on the preferred approach to the N and trash modules. R Viator was also to be included in development of the recommendation. Acceptance of this concept proposal was moved M Smit and seconded J-F Martiné. The motion was adopted.

5.4 CASUPRO sugarcane model release

The CASUPRO model is designed to model sugarcane growth on a stalk basis. This design approach facilitates simulation of dry matter and sucrose accumulation at the stalk and node level. Development of CASUPRO is not sufficiently complete to be distributed as a DSSAT crop model, although it will run within the framework. This project will complete coding the model for release with DSSAT and provide an evaluation of simulating individual node responses to environmental and crop production inputs.

F Royce will visit Cenicaña in June and this should allow better understanding of Cenicaña’s future resource commitment to the development of CASUPRO. F Royce and J Shine will then collaborate to develop a pre-proposal by 1st August 2008 for this



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activity. A motion to approve this action was moved by G Kingston and seconded M van den Berg. The motion was adopted.

6. Status of Project #1

The incorporation of CANEGRO into the DSSAT CSM 4.5 release has been completed and the β version of the model was released to attendees of the DSSAT 4.5 training sessions held at UGA between 12 and 21 May 2008. The project is thus complete and all costs have been covered. It was moved (M van den Berg) that Abraham Singels, Matthew Jones and Cheryl Porter be heartily congratulated on the successful completion of the first ICSM project (seconded G Kingston). The motion was carried with acclamation.

7. New business

7.1 Fees for new members

Up to the end of year two (November 2008) new members could still join ICSM with a payment of USD2900, which represents the \$1000 membership for 2008-09 and a previous fees due of \$1900. G Hoogenboom noted that continued recovery of fees for previous years could be a deterrent to growing the membership and R Viator suggested the new members fee might include the annual fee plus an additional equity fee based on the cash balance divided by the number of current members. The current MOU is in place until November 2009 and a new MOU, including membership fees, will need to be discussed at the 2009 business meeting.

7.2 IP issue with DSSAT CANEGRO

M van den Berg was to liaise with the DSSAT management team with regard to insertion of suitable words above the model coding to attribute the development of the DSSAT CANEGRO module to SASRI and ICSM.

7.3 Next ICSM workshop / business meeting

The ISSCT Agronomy Workshop to be held in Uberlandia, Minas Gerais, Brazil between 25th and 29th May 2009 provides a good opportunity for adding value to travel associated with the next ICSM meeting. It was resolved to plan the next meeting on this basis. J Shine was to approach Rob Gilbert to act as a coordinator to liaise with Gaspar Korndörfer in the planning of the meeting. G Kingston suggested that a day might be set aside for sharing and demonstration of experience with applications of DSSAT CANEGRO at this meeting. J Jones suggested the Agronomy Workshop might also



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provide an opportunity for a wider demonstration of the application of cropping systems models

7.4 Election of officers and management committee

The Chairman called for nominations for the positions of Chairman, Secretary / Vice-Chairman and Treasurer.

Chairman: J Shine was nominated by G Kingston, seconded M van den Berg. There were no further nominations and approval was moved by M Smit and seconded J-F Martine. The motion was carried.

Secretary / Vice-Chairman: G Kingston was nominated by M Smit, seconded S Chinorumba. There were no further nominations and approval was moved by M van den Berg and seconded J-F Martine. The motion was carried.

Treasurer: M van den Berg was nominated by M Smit, seconded L Perez. There were no further nominations and approval was moved by J-F Martiné and seconded S Chinorumba. The motion was carried.

8. Adjournment

A motion for adjournment was moved by M Smit and seconded by R Viator at 14:25. The motion was carried.

Secretary / Vice-Chairman