



International Consortium for Sugarcane Modelling

Minutes of an ICSM Business Meeting held at the Hotel Shopping Plaza, Uberlandia MG, Brazil 22-23/5/09

Present

- Deputy Chairman / Secretary: Graham Kingston – BSES Limited
- Treasurer: Maurits van den Berg – South African Sugar Research Institute
- Fred Royce – University of Florida (proxy for Jim Shine)
- Jean-Louis Choppart – CIRAD Reunion
- Abraham Singels - South African Sugar Research Institute
- Fábio Marin – EMBRAPA Brazil (visitor)

Apologies

- Jim Shine – Sugar Cane Growers Cooperative, Florida
- Attachai Chinawat – University of Chang Mai, Thailand

Call to order

The Deputy Chairman called the meeting to order at 13:19 on 22nd May 2009 and welcomed members and Fábio Marin as an observer.

Attendance and establishment of a quorum

As there were representatives or a proxy from four of the eight member organisations and an apology from Thailand it was agreed there was a quorum to allow the meeting to proceed.

Reports

First ICSM Project – Incorporating CANEGRO into DSSAT 4.5

Abraham Singels reported that CANEGRO became a modular component in DSSAT 4.5 in March 2008, and a beta version was exposed at the May 2008 DSSAT training course

at Griffin Georgia. The official version is still not available due to some challenges in getting the parameter optimisation routine (GLUE) to work for sugarcane. Scientific and user documentation of the model and operating instructions were circulated to project members in March 2009.

International Varieties Experiment

The meeting discussed the crop physiology assessment protocol developed by Michiel Smit from SASRI in relation to the concept proposal for a project to examine the phenological development of a common suite of international varieties grown in different environments to assess stability of parameters used in the CANEGRO model. The experiment should also provide preliminary data on the role of crop physiology on the GxE interaction which limits utility of many clones outside their selection environment. The issue of non-standard terminology was highlighted and was to be the subject of a multiple ICSM authored paper to be presented by Maurits van den Berg at the ISSCT Agronomy Workshop in Uberlandia.

Coordination of the project was seen as a key issue. It was agreed there should be at least three core varieties at each site, with additional clones of local interest to be added according to the resources of the host institution.

The meeting resolved to proceed with development of this project, with Abraham Singels deputised to re-draft the proposal, circulate to committee members for comment and then circulate widely among sugar research institutions to invite comment and expressions of interest in participation.

Progress with CASUPRO

Fred Royce outlined progress with development of routines in the CASUPRO model which he is developing in association with Cenicaña. Evaluation of the leaf area routines was underway but plans to implement an N stress routine had not been realised to date. A new root growth module from Cenicaña will be incorporated. Fred hopes to assemble three data sets from Colombia and Florida for further testing of CASUPRO. Redistribution of coefficients between species, ecotype and cultivar files has been undertaken prior to sensitivity analysis.

One of the concept proposals from the Georgia meeting was for incorporation of CASUPRO into DSSAT 4.5. This goal is likely to be achieved but CASUPRO will not appear on the main DSSAT menu for sugarcane. The initial benefit of this outcome is that ICSM has credentials beyond a single model concept and this may appeal to new members.

Due to funding limitations Fred preferred a slower approach to CASUPRO development compared with investment in the proposed international varieties project. Trash management is an important issue for green cane harvest in Colombia and Fred was to

liaise with Jim Jones, Cheryl Porter and Maurits van den Berg about costs and time associated with inclusion of N and trash modules in CASUPRO.

Trash decomposition model

Maurits van den Berg presented an outline of the SASRI trash decomposition model.

Impact of climate change on sugarcane yield in Brazil

Fábio Marin made a presentation on the work that EMBRAPA has done with DSSAT CANEGRO 4.5 to examine the impact of climate change scenarios for temperature only on sugarcane yield in São Paulo State of Brazil. Four temperature scenarios to 2100 were assessed – current temperature and rises of 1.8, 2.4 and 4.0°C. The pessimistic and least likely scenario suggested areas with yield >95 t/ha would face a yield reduction in relation to the current situation. Effects of the other two temperature scenarios would be very small on production, with some opportunity for a small yield increase on clay soils and further development of the industry in southern São Paulo where the climate is cooler and wetter than in current production areas.

Business meeting

Previous minutes

Acceptance of the minutes of the May 2008 meeting was proposed by Graham Kingston and seconded by Maurits van den Berg after the following correction to the previous minutes was noted for the Treasurer's report. The cash balance of ZAR 25490.45 was relevant to 1st not 30th April 2008, and another USD100 was received between 1st and 30th April. The minutes were accepted.

Treasurer's report

The cash balance on the bank statement as of 1st April 2009 was ZAR97,151.04 (equivalent to USD11,429.53 at an exchange rate of ZAR8.5 per USD). As at 12/1/09 memberships for the previous year were outstanding from Zimbabwe, Fiji and SCGC. An adjustment to the SCGC invoice was agreed because of their expenditure associated with the meeting in Georgia. The Treasurer was to liaise with Jim Shine on this matter. It was also noted that Zimbabwe did not pay the final project instalment on 2007-08. The Treasurer was to follow up on outstanding invoices.

Maurits van den Berg moved acceptance of the Treasurer's report; seconded by Fred Royce. The report was accepted.

General Business

Membership

There was a discussion on membership and membership fees in relation to the accumulation of fees and opportunity for their expenditure. It was resolved to maintain annual membership at USD1,000 and that funds surplus to ICSM operating requirements might be used to fund small projects approved at business meetings.

Fábio Marin indicated that EMBRAPA was still very interested in the objectives and outputs of ICSM but Federal rules governing expenditure did not allow EMBRAPA to transfer money for activities classified as membership. A product or service was required for such expenditure. As the Cane Technology Centre (CTC) in Piracicaba are also interested in applying sugarcane models and have a good working relationship with EMBRAPA there may be opportunity for EMBRAPA involvement *via* CTC. Maurits, Abraham and Graham were to follow up on this during a visit to CTC in the following week.

It was resolved that Cenicaña (Colombia), CTC (Brazil), EEAO (Argentina), INCA (Cuba), University of Puerto Rico and University of Florida should be invited to join ICSM and comment on project proposals with the view to becoming members.

Memorandum of understanding

The Memorandum of Understanding (MOU) which guided establishment and operation of ICSM from 2006 expired on 22nd May 2009. The meeting resolved to re-draft the MOU to cover operation of ICSM until 22nd May 2012. The first MOU was discussed and options for its modification were identified. Graham Kingston will undertake the initial re-draft and circulate the document to members and potential members before a final version is distributed for signature by the organisations.

Election of Committee Members

Nominations and election outcomes for the following positions were achieved:

- Chairman: Jim Shine – nominated Graham Kingston, seconded Maurits van den Berg – elected
- Deputy Chairman / Secretary: Graham Kingston – nominated Maurits van den Berg; seconded Abraham Singels – elected
- Treasurer: Abraham Singels - nominated Maurits van den Berg; seconded Fred Royce – elected

Next Meeting

It was agreed the next meeting would be held in association with the ISSCT Congress at Vera Cruz in Mexico in March 2010, unless a better opportunity can be identified in the interim.

Meeting close

The meeting closed at 12:03 on 23rd May 2009.

A handwritten signature in black ink, appearing to read 'C. Kingston'. The signature is written in a cursive style with a large initial 'C' and a long horizontal stroke at the end.

Secretary ICSM