SOUTH AFRICAN SUGARCANE RESEARCH INSTITUTE

Unlocking the Potential of Sugarcane

Research associate
Sugarcane crop modelling

The South African Sugarcane Research Institute based in Mount Edgecombe near Durban seeks a research associate to join an experienced team of researchers to conduct exciting crop modelling research in sugarcane.

Research associate: Modelling sugarcane canopy development and biomass partitioning (Nov 2009 to Dec 2012, Mount Edgecombe, ZAR 150 000 pa)

Genetic, environmental (e.g. water status and temperature) and management (e.g row spacing and mulch layers) factors all effect crop growth and development processes such as leaf and tiller phenology, resource capture, biomass assimilation and partitioning. The aim is to develop conceptual models from recently acquired physiological knowledge about these interactions and incorporate it into the DSSAT Canegro sugarcane model.

The research associate will work with leading scientists and programmers to:

- develop a coherent set of integrated conceptual models, appropriate algorithms and mathematical relationships;
- incorporate these into the existing DSSAT Canegro v4.5 code,
- test the new model against experimental data, and
- document model changes.

Research outcomes will include the code and scientific documentation of the new version of DSSAT Canegro as well as publications in scientific journals.

The ideal candidate will have:

- A Ph.D. in botany, crop science, agronomy, soil science, agrometeorology or related field.
- Experience in crop simulation modeling.
- The ability to use software to quantitatively analyse crop experimental data and simulate crop and soil processes.
- The capacity to conduct independent research.

Further information on the sugar industry may be accessed on http://www.sugar.org.za

For further information please contact Dr. Abraham Singels abraham.singels@sugar.org.za

Send your applications with cover letter, detailed CV, publication list and contact details of three referees to: applicants@sugar.org.za, stating the post that you are applying for.

Closing date:
Until a suitable candidate has been identified.