GCP Sub-Programme 4: 2006 Commissioned Research Project #Id 34

Installation and implementation of ICRISAT LIMS at Biosciences Eastern and Central Africa (BecA) facility and IITA–Ibadan

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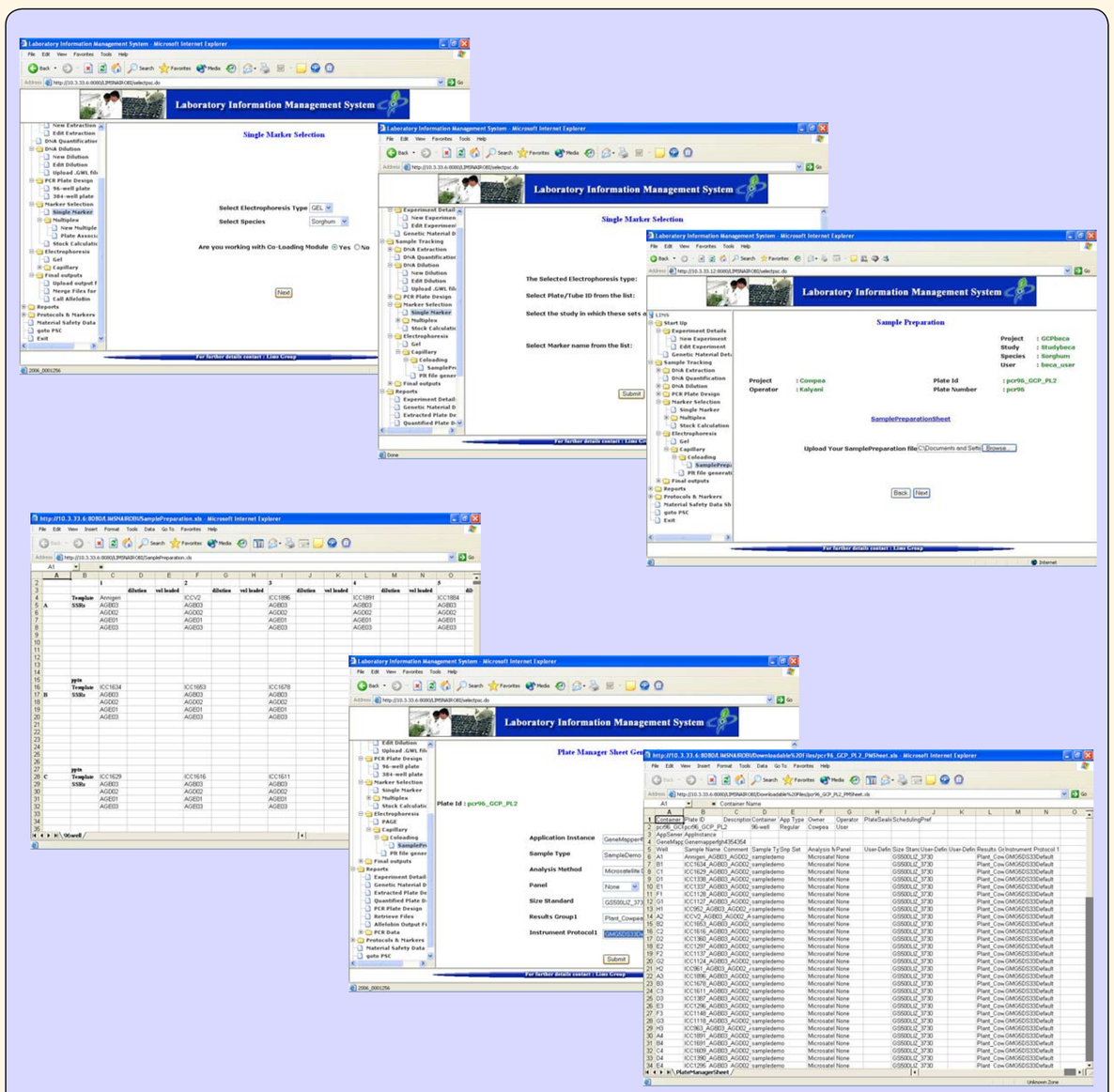
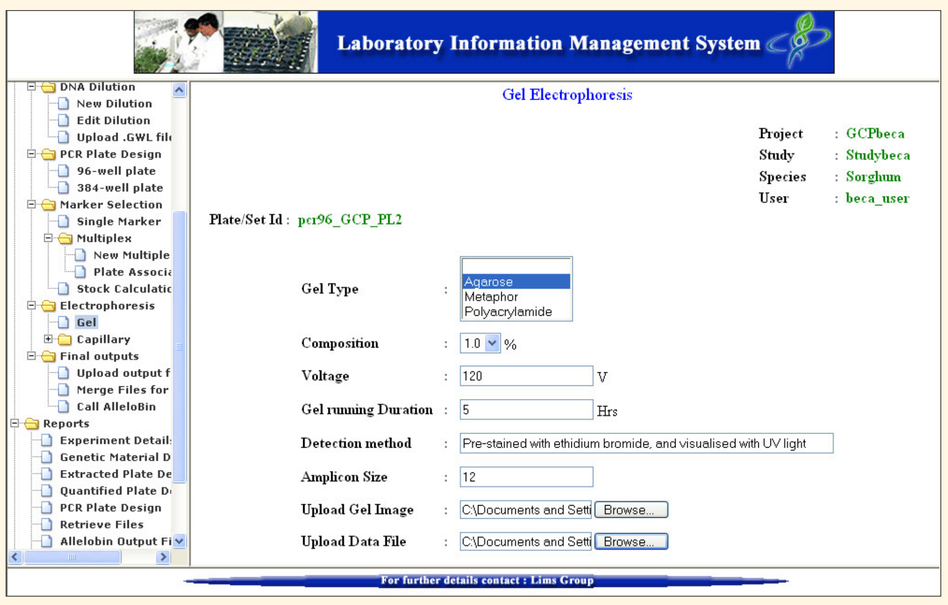
- The laboratory information management system (LIMS) was developed using freely available software. Graphical user interface (GUI) and middleware have been implemented using Java Struts Framework technologies. PostgreSQL database is used for data storage.



User interfaces for the 'co-load' module & the plate manager sheet for ABI 3730.

Gel electrophoresis

- Gel images and data files are stored in a separate folder
- Retrieval page allows retrieval of images along with associated data.



Workshop at BecA

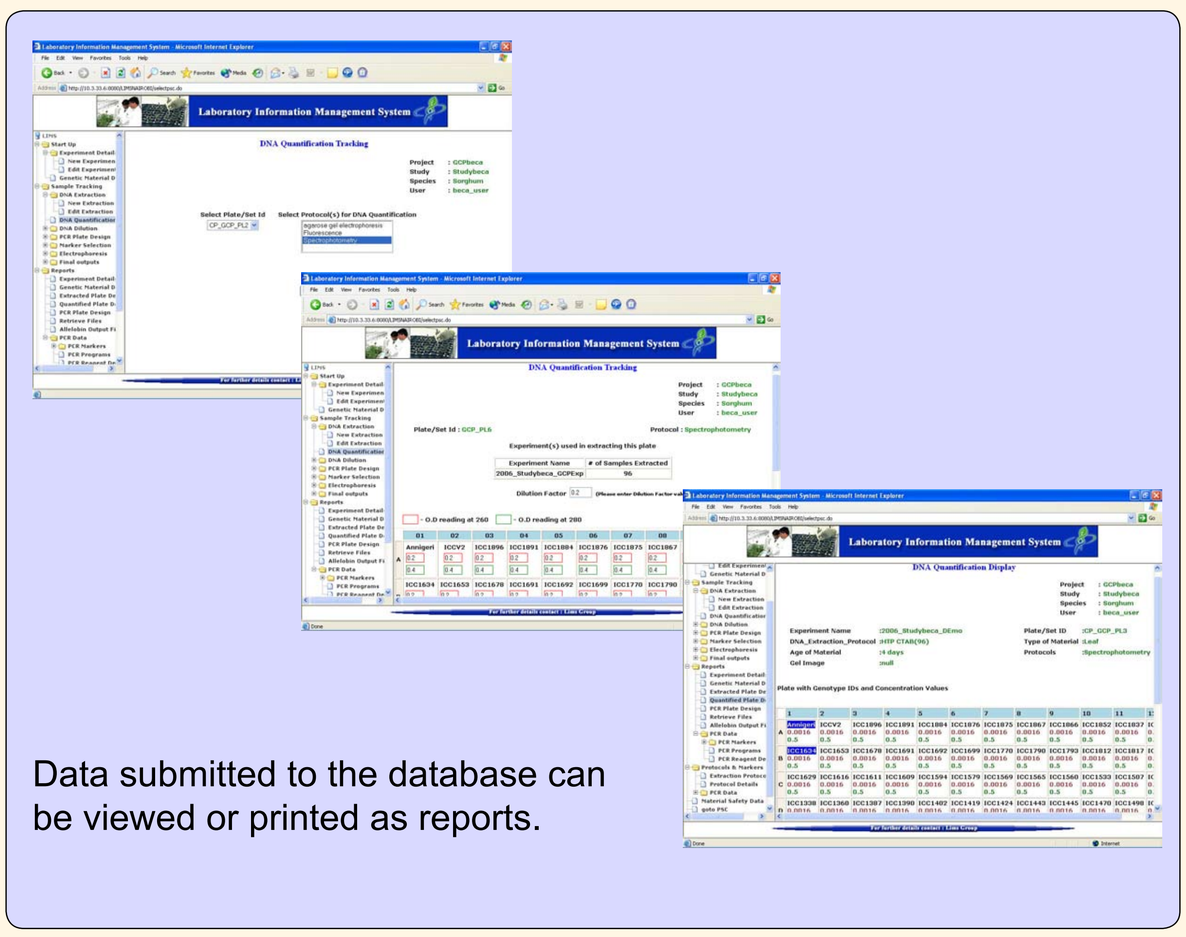
- One-day workshop was conducted at the ILRI facility in Nairobi on 18 August 2006, after the installation
- Twenty participants from the African national centres besides scientists and research staff from ILRI, IITA and ICRISAT-Nairobi attended the workshop. The national program participants included students and staff from Nairobi and Kenyatta Universities, research staff from the Kenya Agricultural Research Institute (KARI)-Katumani and the International Centre of Insect Physiology and Ecology (ICIPE)
- Actively participated in testing the application and providing feedback
- ILRI-IITA collaborators requested modules to perform additional functions, besides extending LIMS for data capture in large scale mapping experiments.

New module implemented

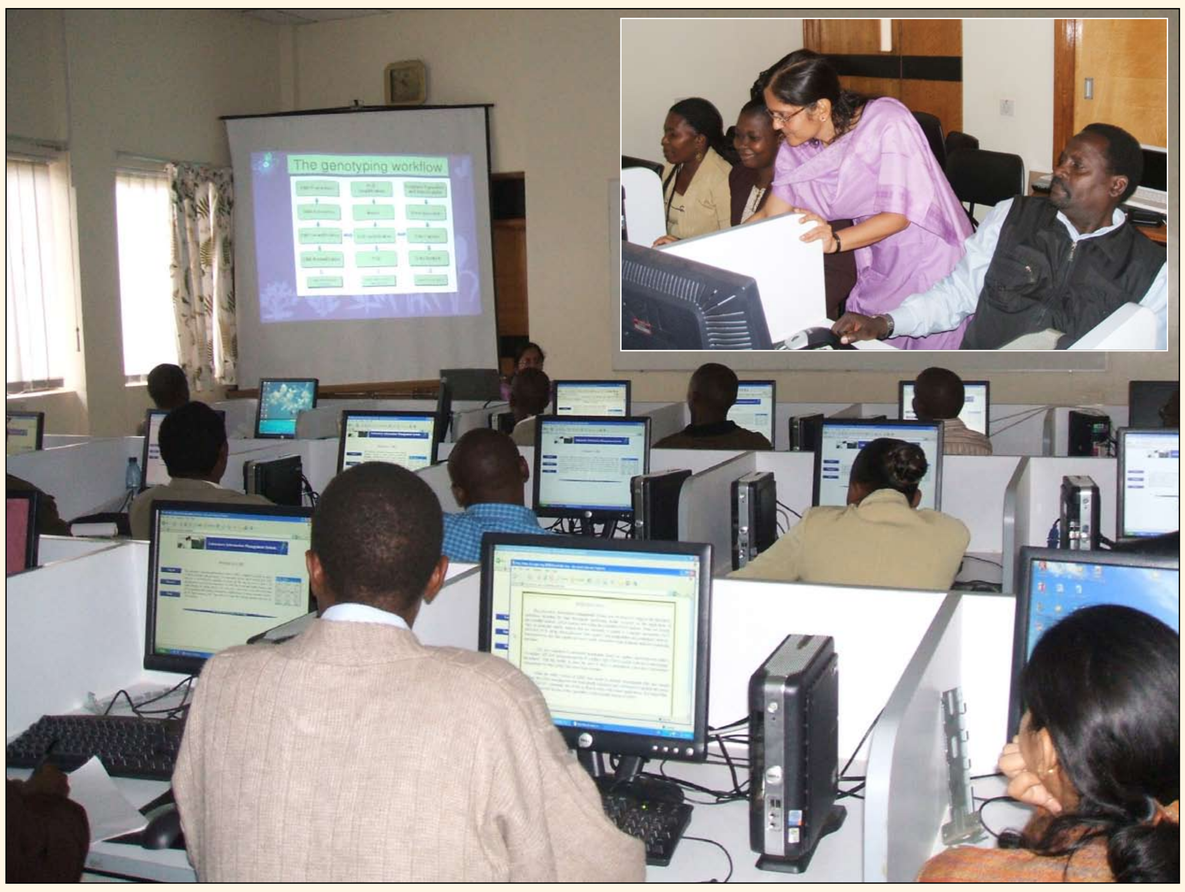
- 'Co-load' polymerase chain reaction (PCR) products – A protocol used for loading plates for capillary electrophoresis at ICRISAT/IITA/ILRI-Nairobi
- Generates PCR plates for ABI 3130 and ABI 3730 DNA analyzers
- Incorporates sample preparation and plate manager sheet generation for ABI 3130 and 3730.

Spectrophotometric determination of DNA concentration

- Accepts optical densities at 260/280 for quality determination
- Upload of quantified plate from the NanoDrop spectrophotometer.



Data submitted to the database can be viewed or printed as reports.



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