

UMS to help SAIP on biotech work

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By Larry Ralon

KOTA KINABALU: Universiti Malaysia Sabah's (UMS) Biotechnology Research Institute (BRI) is looking forward to work closely with the Agriculture and Food Industry Ministry, particularly in making the Sabah Agro-Industrial Precinct (SAIP) a reality, by capitalising on the commercialisation of its biotechnology research.

BRI Director, Prof Datin Dr Ann Anton, said this at the official opening of the three-day Third Biotechnology Symposium themed 'Agrobiotechnology: Modernising Agriculture through Molecular Biology' at the UMS Chancellery Building here last week.

SAIP, which is being developed by its Implementation Co-ordination Committee (SICC) on a 215-acre land in Papar, is a test-bed for carrying out biotech-driven research and development (R&D) and developing biotech-driven business.

SAIP is to play a major role not only in transforming the State's agricultural sector, but also in complementing the Federal Government's effort of harnessing biotechnology as an engine to drive the nation's economy.

This year's symposium follows the first and second held in 2002 and 2004 respectively.

Ann said this year's theme was chosen to reflect the current role of biotechnology in impacting agriculture, in addition to healthcare and industries – the three key areas identified in the National Biotechnology Policy which was launched by the Prime Minister in April last year.

"The debate over agricultural biotechnology worldwide has largely focused on international trade in GM foods. While biotechnology cannot solve all the problems associated with agricultural production, it has the potential to address specific problems," she said.

These include increasing crop productivity, diversifying crops, enhancing nutritional value of food, reducing environmental impacts of agricultural production, and promising market competitiveness.

Modern biotechnology like the utilisation of molecular biology can enhance the competitiveness of agricultural products and thereby promote their integration into the global economy, she said,

adding efforts to diversify agricultural production will not only promote food security but will also add new crops to the world of food market.

At the BRI, she said, they undertake agrobiotechnology research in two focus areas, firstly in the area of crop improvement through genetic engineering the studies of which include the identification of molecular markers for specific genes of economic interest; transgenic technology through gene cloning and transfer and; cloning and characterisation of new promoters, genes, enhancers and terminators for plant transformations.

The expected products are disease and insect resistant plants; high-yielding cultivars, prolonged shelf-life, and improved quality of crop plants, she added.

"The pineapple is one of the crops being studied at the moment," she said, adding that the second area of focus is the bioconversion process, gene manipulation of the microbes for enhanced properties and improvement of the fermentation processes.

"Currently, BRI, in collaboration with the Korean Research Institute for Bioscience and Biotechnology (KRIBB) are working on the fermentation of palm kernel cake (PKC), a by-product of the palm oil industry in Sabah," she said, adding there will be a special session in the symposium to report on the progress of this project.

"The use of biotechnology in agriculture research is seen as part of the overall innovation system involving goal-oriented interactions between Government, industry and universities," said Ann.

She said the main purpose of the symposium is to showcase the various molecular tools used in agro-based research is to showcase the various molecular tools used in agro-based research in the hope of instilling awareness as to the vast potentials of biotechnology in advancing research beyond tissue culture, as well as to bring together scientists and foster networking.

Altogether 79 participants including speakers from Australia, Thailand and United States as well as local scientist and 17 Korean scientists from KRIBB and officials from Korean Ministry of Science and Technology have registered for the symposium.