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In cooperation with National Institute of Education, Singapore; and the International Service for the Acquisition of AgriBiotech Applications (ISAAA)

A Training Course on

Commercialization of Biotechnology Crops in Asia

Moving from ideas to useful products in farmers' fields

Background

The Asian region has over 60% of the world's people, some of the oldest civilizations, and many countries that are technological leaders in the electronics and food production sectors. Experts estimate that the current strong economic growth shown by many Asian countries is likely to continue, concomitant with an increasing population and increasing demand for more food of higher quality. The number of farmers is anticipated to decline relative to non-farm sectors, and the need to increase total food production by increasing the productivity of land and water, using modern, sustainable technology, is well-recognized by many Asian leaders.

Information technology and biotechnology are two such new technologies. Biotechnology in particular has the potential to significantly increase crop and animal yields while improving the income of small farmers and enhancing the environment. In food production, biotechnology's most significant impact has been to increase the availability of seeds with improved characteristics such as resistance to pests and diseases. The technology allows farmers to use less pesticides and save costs, and also farm in a more healthy way.

In Asia, five countries have approved the commercial planting of biotech seeds. Another five have officially approved the importation of biotech seeds for food and feed. Most of these seeds (cotton, corn, canola, soybeans) are currently produced from germplasm owned by private companies. Several governments have expressed strong intentions to make biotechnology the next pillar for their economic growth. The Asian Development Bank has shown that the public sector in Asia, in the form of government research organizations and universities, has invested millions of US dollars in research and development (R&D) to produce biotech seeds, and that there is a large pipeline of biotech-improved plants at various stages of biosafety and efficacy testing. However, without exception, these organizations lack the requisite skills to move beyond just R&D.

This rapid pace of progress has brought with it a number of new challenges in regulation, food safety, biosafety considerations, intellectual property issues and public awareness. This training course will provide a detailed understanding of these issues, and their inter-relationships, tailored to the needs of senior level policymakers, executives, the diplomatic and investment communities.

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Course Objectives

- Provide a comprehensive, in-depth understanding of the principles, approach, regulatory requirements, information needs, awareness-building techniques, and stewardship requirements for commercializing a biotechnology seed product for widespread farmer adoption
- Provide opportunities to network with experts and to become knowledgeable about supporting resources in the region and worldwide, which are relevant to the commercialization of agricultural biotechnology

Course topics: What will be learned?

- Understanding the "landscape" of biotech crops: Key players, products in the market, market size and relative market shares, the R&D pipeline in the public and private sectors, consumer expectations, key investors.
- Steps in the process to commercialize biotech-seeds ---
  Product concepts, product development, regulatory approval for food and feed, public acceptance, and farmer-adoption – "Stage Gating"
- Regulatory frameworks for biosafety, intellectual property protection, and commercial approvals
- Biosafety considerations in early "proof of concept" experiments. Biosafety-related requirements in contained and open field experiments
- Intellectual property management and technology transfer/exchange mechanisms
- Regulatory approval: Assembling a supporting dossier for biosafety approval. Approach and information needs.
- Food and feed safety assessment: Principles, regulatory and science requirements
- "Freedom-to-Operate" (FTO): Harmony between technical, governmental and social acceptance
- Integrating biotech products with conventional seed bulk-up programs in the public sector
- Protecting the investment: Product stewardship principles and programs such as resistance management
- Protecting the investment: Key messages and communication strategies to create receptive environments in specialized and general constituencies. How to design and conduct public awareness, support-building activities
- Multilateral environment agreements (MEA's) and their impact on the commercialization of agricultural biotechnology
- Resource and knowledge networks to support biotechnology

Visits will be arranged to relevant, innovative companies and organizations in biotechnology. The focus of the course will be on conditions in the Asian region, with experienced resource persons who have been active players in commercializing biotech seeds in the region.

Who should attend?

- Public sector scientists, R&D managers, government officials responsible for driving commercialization of biotechnology, and regulators, managers of biotechnology projects.
- Private sector, company personnel who desire a comprehensive understanding of the entire "R&D to product commercialization" chain.
- Biotechnology managers of bilateral and multilateral donor organizations who want to gain a full understanding of this exciting new industry
- Portfolio managers and directors of investment and commercial banks.
- Asia-based diplomatic personnel e.g. economics, commercial or agricultural attachés
- Legislators and their aides in countries with expressed interest to develop strong biotech industries
- Civil society groups wanting to understand the technology.

The number of participants will be limited to 30 per course.

Course Format

- This is a 5-day, in-house, hands-on training and learning course
- All participants are expected to be in residence as course hours will be from 08.30h to 17.30h each day.
- The course will consist of lectures, tutorials, knowledge laboratories, and visits to biotech facilities.

Resource persons

- Professor Paul S. Teng, Head, Natural Science & Science Education, National Institute of Education, Nanyang Technological University, Singapore; Board Member, International Service for the Acquisition of Agribiotech Applications; (and formerly Deputy Director-General for Research, Worldfish Center; and Monsanto Asia-Pacific Vice President for Public Affairs)
- Dr. Andrew Powell, CEO, Asia BioBusiness Pte. Ltd., Singapore
- Mr. Wyn Ellis, National Innovation Agency, Thailand
- Mr. Art Baria, Former Regulatory Affairs Manager, Monsanto Philippines
- Dr. Wally Beversdorf, Former Vice-President Research, SYNGENTA, Switzerland
- Dr. Randy A Hautea, ISAAA.
- Others as identified in pre-course surveys.

Organizers

The course is organized by Asia BioBusiness Pte. Ltd., a company dedicated to promoting biology-based entrepreneurship in the Asian region based on partnerships between public and private entities; in cooperation with the National Institute of Education, Singapore; and the International Service for the Acquisition of AgriBiotech Applications (ISAAA).

Course logistics

The first course will take place between 19-23 June 2006, in Manila, The Philippines at the Somerset Millennium Hotel, Makati, Metro Manila, the Philippines

The all-inclusive course fee is US$2,500.00 per participant. This covers material and six nights of accommodation (including five days of specially catered meals). Cost of travel to and from the course venue in Manila, Philippines is not included. Registrants paying the registration fee by 31st April, 2006 will receive a discount of $150.

Pre-registrations may be made via email to <info@asiabiobusiness.com> by submitting your name, address, (sponsor, if applicable), phone and / or email contact using the attached form. Closing date for pre-registration is March 31 2006.

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Sponsorship

ABB is pleased to offer a limited number of sponsorships for the course to public sector participants from developing countries, who are actively involved in research, regulation or commercialization of biotech crops. Please contact Asia BioBusiness for further details of the sponsorshop scheme.
