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ISAAA Seminar on the Global Status of Commercialized Biotech Crops

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Report Highlights:

The International Service for the Acquisition of Agri-Biotech Applications (ISAAA), in coordination with the Science, Technology and Environment Department of Vietnam's Ministry of Agriculture and Rural Development (MARD), held a seminar in Hanoi, Vietnam on March 9, 2011 to discuss biotechnology applications in Southeast Asia and share information from ISAAA's recently released report, "Global Status of Commercialized Biotech/GM Crops: 2010." Vietnam clearly has a keen interest in the progression of research on biotech crops, especially rice, although several audience members were concerned with how public perception could affect local and export markets.

Overview:

The International Service for the Acquisition of Agri-Biotech Applications (ISAAA), in coordination with the Science, Technology and Environment Department of Vietnam's Ministry of Agriculture and Rural Development (MARD), held an afternoon seminar at the Sofitel Plaza Hotel in Hanoi, Vietnam on March 9, 2011, to discuss biotechnology applications in Southeast Asia and share information from ISAAA's recently released report, "Global Status of Commercialized Biotech/GM Crops: 2010." The lineup of speakers featured Dr. Clive James, chair and founder of ISAAA; Dr. Randy A. Hautea, ISAAA's Global Coordinator; and Dr. Trieu Van Hung, Director of MARD's Science, Technology, and Environment Department. Brief descriptions of the presentations and discussion panel are found below. Interestingly, while MARD has long been a proponent of biotechnology, this is the first time MARD officials have spoken so openly in a public forum about Vietnam's intention to commercialize GM crops. Although there was a sincere openness on the part of the Government of Vietnam to exploring State use of biotech applications, Dr. Trieu acknowledged that not all Vietnamese scientists agree on whether the country should embrace commercialization, and that a strong legal framework is necessary to usher in the technology. Audience members expressed both an interest in the beneficial qualities of biotech crops and a concern about producing crop varieties that may be subject to import restrictions in other countries.

Audience:

Attendees included representatives from Monsanto, Syngenta, and other biotechnology companies; representatives from numerous agencies of the Government of Vietnam (GVN), including the Ministry of Industry and Trade (MOIT), National Assembly Office, and Ministry of Natural Resources and Environment (MONRE); agricultural research scientists; U.S. Embassy representatives; and the press, among others.

Speakers:

Dr. Nguyen Tri Ngoc, Director of MARD's Crop Production Department, served as the facilitator.

Dr. Trieu Van Hung provided the opening speech of the seminar. He described the GVN's intention to produce GM corn, soy, and cotton by 2020, with the goal of 30-50 percent of commercial crops being GM by that date. MARD has already licensed two major agricultural biotechnology companies to perform large-scale field trials of GM corn. Dr. Trieu said he expects the first commercial production of GM corn to be underway by 2012.

Next, **Dr. Randy A. Hautea** provided an introduction to ISAAA and its principles. ISAAA is a non-profit organization with an international board of directors. It was founded in 1992, five years before the first commercial cultivation of GM crops. Its mission, as stated by Dr. Hautea, is to "help increase crop productivity and income generation, and bring about a safer environment and more sustainable agricultural development." ISAAA strives to facilitate the global exchange of knowledge on crop biotechnology, particularly to farmers in developing countries, while respecting people's decisions about the use of the technology. The organization's knowledge-sharing goal is realized through three activities: 1) an annual biotechnology status review; 2) a weekly newsletter with more than one million subscribers; and 3) a pool of multimedia communication resources.

Dr. Clive James gave the keynote presentation, providing highlights from the 2010 ISAAA status review entitled “Global Status of Commercialized Biotech/GM Crops: 2010.” According to Dr. James, the 2010 report was unique for three reasons: 1) biotechnology experienced progress on virtually every front; 2) several historical landmarks were achieved; and 3) developing countries played a much stronger role in the propagation of biotechnology. Like Dr. Hautea, Dr. James emphasized that ISAAA is a “pro-choice” organization that respects the rights of others to make their own decisions. He acknowledged that biotech crops are not a panacea, but that “a technology component is essential” to double food production by 2050 on fewer resources in a sustainable manner. He also stressed that biotech crops are “as safe” as conventional crops.

Pulling from the 2010 ISAAA report, Dr. James provided highlights on the adoption, impact, and future of biotech crops. Biotech crop cultivation experienced exponential growth in the first 15 years, culminating with over 1 billion hectares of GM crops planted in 2010 – a land area larger than the size of the United States. The widespread adoption of these crops, Dr. James said, is a hallmark of their value to farmers, who are “masters of risk aversion.” Taking a jab at anti-biotech groups, Dr. James posed the hypothetical question, “[Would you] trust Friends of the Earth or 100 million farmers?”

Biotechnology is the fastest-adopted innovation in the history of agriculture, and acreage in developing countries is increasing at three times the rate of acreage in developed countries. Currently, 29 countries (10 industrialized, 19 developing) grow biotech crops. The only Southeast Asian countries on the list at present are the Philippines (potatoes, soybeans, sugarbeets) and Myanmar (cotton). Dr. James emphasized the fact that that of the top ten countries in biotech acreage, eight are developing nations; and that of 15.4 million biotech farmers, 90 percent are small and resource-poor farmers.

Dr. James’ discussion of the global impact of biotech crops highlighted several frequently-touted benefits, including improvements in productivity, farm income, biodiversity, and external inputs. According to Dr. James, biotechnology contributed to farm income gains of \$65 billion from 1996 to 2009, combining the effects of cost reduction and production gains. In terms of environmental improvements, he touted the conservation benefits of no-till and low-till systems, reduced CO₂ emissions, and a nine percent reduction in pesticide usage from 1996 to 2009.

Dr. James’ final area of focus was the future of biotech crops, specifically the remaining five years of the second decade of commercialization. According to Dr. James, three elements are required for success: 1) political will; 2) access to new and improved biotech crops; and 3) appropriate and efficient regulation in developing countries. Dr. James stated that several new crop and trait options will be ready before 2015. Drought tolerance is a principal research focus due to likely changes in weather patterns in the coming years. Biotech rice is also a strong priority due to the nearly 1 billion beneficiaries that could make use of the technology. Dr. James expects that Asian influence in biotechnology will be stronger in the second decade of commercialization, underscoring that appropriate regulation is necessary to spur progress in the field. Making some predictions about the state of biotechnology in 2015, he quoted ISAAA estimates that 40 countries and 20 million farmers will be planting biotech crops by that date.

Discussion Panel:

The question and answer segment of the seminar allowed the attendees to voice some comments and concerns about the adoption of biotechnology in Vietnam. All three speakers participated in the discussion panel. The following themes emerged from the audience questions:

1. Concern for rice exports – Two audience members expressed concern that biotechnology has a “bad image” in many countries, and thus importers may not wish to purchase GM rice or other crops if and when they are grown in Vietnam. Dr. James responded by emphasizing the safety of GM crops and their growing acceptance in world markets.
2. Vietnam’s research strategy for rice – Several attendees expressed great interest in the efforts underway on rice, Vietnam’s most important crop. The panelists indicated that the GVN is performing gene transfer research on rice, including the Mekong Delta Institute’s research on golden rice.
3. Bt resistance – Dr. James allayed concerns about insect species becoming immune to Bt toxin, stating that there has not yet been a break in resistance and describing strategies for preventing resistance.
4. Information-sharing and resources for Vietnamese farmers – The panelists promoted the Asian Farmers Regional Network (ASFARNET), as well as ISAAA’s communication resources, as useful tools to help farmers share experiences on the use of biotech crops.
5. Intellectual property rights and monopoly of the seed supply – Several audience members expressed desire for fair competition in biotechnology research and commercialization.

Overall, the audience appeared to be less concerned with the safety of GM crops and more concerned with how public perception could affect local and export markets. Attitudes towards biotech research in Vietnam seemed positive, but concerns remained about monopolies in the supply of seed. Dr. Trieu acknowledged that not all scientists in Vietnam agree on whether the country should commercialize GM crops, and that a strong legal framework is necessary to usher in the technology. Vietnam clearly has a keen interest, with a dose of skepticism, in the progression of national and international research on biotech rice and other biotech crops.

Additional highlights from the report “Global Status of Commercialized Biotech/GM Crops: 2010” can be found on the ISAAA web site. A full version of the report can be purchased online for \$50.00. Copies are free of charge to eligible nationals of developing countries.

Reference:

James, Clive. 2010. “Global Status of Commercialized Biotech/GM Crops: 2010.” *ISAA Brief No. 42*. The International Service for the Acquisition of Agri-biotech Applications (ISAAA). Ithaca, NY. URL: <http://www.isaaa.org>