CROP BIOTECH UPDATE

A weekly summary of world developments in agri-biotech for developing countries, produced by the Global Knowledge Center on Crop Biotechnology, International Service for the Acquisition of Agri-biotech Applications SEAsiaCenter (ISAAA), and AgBiotechNet

---

February 27, 2004

In This Issue:

* Media Coverage of Biotech Issues in Kenya Increases
* Regulatory Agencies in the US Unifies Biotech Website
* Phil President Receives FAO Medal for Agriculture
* China Approves Safety Certificates for US for US Agri Products
* USDA Updates Its Biotech Regulations
* Phytodyne Develops Genome Editor
* New Germplasm Promises Healthier Soybean Oils
* Biodiversity for Development
* Announcements:
  - BBI's Grants Program – Call for Proposals
  - Workshop on Detection of Protein/DNA in Biotech Foods
  - 3rd International Congress on Plant Metabolomics
  - 11th International Lupin Conference

MEDIA COVERAGE OF BIOTECH ISSUES IN KENYA INCREASES

Coverage of biotechnology by Kenyan newspapers has increased significantly over the last two years. This was stated in a recent research conducted by the African Biotechnology Stakeholders Forum (ABSF), and the Kenya Biotechnology Information Center (KBIC). A content analysis of biotechnology issues published between 1998 to 1999, and 2000 to mid-2003 in the country's leading newspapers - The Daily Nation, The East African, East Africa Standard, and The People Daily concludes that biotechnology is becoming a regular agenda among media personnel.

Biotech-related issues were covered under broad thematic areas in agriculture, environment, policy and industry. An interesting finding of this study is that prior to the formation of ABSF in the year 2000, newspapers depended more on foreign sources for biotechnology stories, which in most cases tended to be unbalanced and highly sensational. Between 1999 and 1998, for example, The Daily Nation only sourced 6% of its biotech news locally. Most of its news stories came from foreign sources (27%). The situation was reversed, however, after the formation of the ABSF - with the said newspaper sourcing 46% of its news internally and only 20% externally.

The change was even more dramatic in the case of the East Africa Standard, which sourced 17% locally, and 13% externally between 1998 and 1999 as compared to the 61% local and 39% foreign in the period 2000 to mid-2003. This showed that sensitization of biotechnology activities locally widened the journalists' scope

of sourcing relevant issues for public consumption. The report stated that the findings are consistent with the long-held view that biotechnology would only flourish in Africa if the continent is allowed to set its own agenda.

Results further showed that biotech stories have been given more prominence and are comparatively balanced over the last two years - a trend that could be attributed to the concerted efforts of different stakeholders to train local journalists in science reporting. The report also acknowledged the importance of targeting local journalists in activating public debate from an informed perspective.

For more information about the research, please email Dr. Margaret Karembu at m.karembu@cgiar.org.

REGULATORY AGENCIES IN THE US UNIFIES BIOTECH WEBSITE

The Federal Government of the United States of America has developed a coordinated, risk-based system to ensure new biotechnology products are safe for the environment, and human and animal health. This biotechnology website focuses on agricultural products developed using the science. At present, the searchable database available covers only genetically modified crop plants intended for food or feed that have completed all required reviews for food, feed or planting use in the United States.

The Coordinated Framework for Regulation of Biotechnology, which was established as a formal policy in 1986, describes the Federal system used for evaluating products developed using biotechnology. The Coordinated Framework is based on health and safety laws developed to address specific product classes.

The US government agencies responsible for the oversight of the agricultural products developed via biotechnology are: the US Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), the US Environmental Protection Agency (EPA), and the Department of Health and Human Services' Food and Drug Administration (FDA). An agricultural product may be subject to the review by one or more of these agencies depending on its characteristics.

For more information, visit the Coordinated Framework for Regulation of Biotechnology website at http://usbiotechreg.nbii.gov.

PHIL PRESIDENT RECEIVES FAO MEDAL FOR AGRICULTURE

Philippine President Gloria Macapagal-Arroyo is the first Filipina to receive the Ceres Medal of the United Nations’ Food and Agriculture Organization (FAO) in recognition of her efforts to modernize agriculture to attain food security, social equity and greater job opportunities in the rural areas in the Philippines. FAO Director-General Jacques Diouf presented the Ceres Medal to President Macapagal-Arroyo.

With great pride and humility, the President Macapagal-Arroyo accepted the Ceres Medel, which is the woman’s equivalent of the Nobel Prize for food and agriculture. The President said that her administration is currently implementing a P20 billion agriculture modernization program. To attain food

security, it is propagating the Gloria hybrid rice variety, which is projected to double or triple rice harvests in the Philippines.

In presenting the award, Diouf noted that, in the last three years of her administration, President Macapagal-Arroyo "set the goals for a liberalized economy, a modernized agricultural sector to enhance social equity, and economic growth to favor the disadvantaged groups. Diouf stated that "FAO is proud to assist" President Macapagal-Arroyo in these efforts through its support for the agrarian reform program, which is now FAO's largest technical assistance program in the Philippines.

President Macapagal-Arroyo joined the ranks of distinguished women leaders who have been conferred the Ceres Medal since FAO instituted the award in 1971. The awardees include Prime Minister Indira Gandhi of India, Mother Teresa of Calcutta, Prime Minister Sirimavo Bandaranaike of Sri Lanka, Queen Sirikit of Thailand, Prime Minister Helen Clarke of New Zealand, and Prime Minister Sheikh Hasina of Bangladesh.

See the news release posted at http://www.searca.org/~bic

CHINA APPROVES SAFETY CERTIFICATES FOR US AGRI PRODUCTS

Earlier this week, China has approved the final safety certificates for key agricultural products from the US. China’s Ministry of Agriculture has recently completed its biotechnology regulatory review of Roundup Ready soybeans, two corn, and two cotton products.

China’s approval is considered good news for American farmers, who consider China to be its top foreign customer for soybeans and cotton. According to statements made by US Agriculture Secretary Ann M. Veneman, and US Trade Representative Robert B. Zoellick, "China’s decision to approve permanent safety certificates for several biotechnology crops is another positive step for trade between these two countries and demonstrates the Chinese government’s commitment to the WTO principle of using sound science to determine such issues.

In line with this, the US promises to engage China on outstanding biotechnology issues to ensure that both American and Chinese farmers have access to biotechnology for increasing agricultural productivity and for providing safe and wholesome products to consumers of both countries.

The news release from FAS is available online at http://www.fas.usda.gov/default.htm.

USDA UPDATES ITS BIOTECH REGULATIONS

Agriculture Secretary Ann M. Veneman announced this week the US Department of Agriculture’s (USDA) intention to update and strengthen its biotechnology regulations for the importation, interstate movement and environmental release of genetically modified organisms (GMOs).

Says Veneman, “the science of biotechnology is continually evolving, so we must ensure that our regulatory framework remains robust by anticipating and keeping pace with those changes.” The USDA Secretary added that a comprehensive environmental impact statement is the first critical step in the process to be undertaken. The regulatory system must also operate on sound science, and should involve a careful assessment of risks.

The environmental impact statement will be prepared by the USDA’s Animal and Plant Health Inspection Service (APHIS) and aims to evaluate its biotechnology regulations and other regulatory changes, including the development of a multi-tiered, risk-based permitting system that will replace the current permit/notification system together with enhancements to the deregulation process.

See the news release at http://www.usda.gov/Newsroom/0033.04.html.

PHYTODYNE DEVELOPS GENOME EDITOR

Phytodyne, an Iowa State spin-off company, has recently developed a new gene targeting system believed to revolutionize modern day agriculture. Genome Editor is a gene targeting system based on a naturally occurring process called homologous recombination that can be harnessed to precisely substitute a DNA segment for another. It can remove, add or modify any gene with surgical precision in many commercial crops. Genome editor can also be used to modify multiple genes that work together to bring about complex traits such as improved nutrition and better oil profiles. It can also eliminate unwanted characteristics and improve grain composition to enhance processing qualities.

According to Dan Voytas, Phytodyne co-founder and professor of genetics, development, and cell biology, Phytodyne scientists were the first to use the technology successfully in plants as previous research was focused on human and fruit fly studies. Genome Editor was also found to be more precise and efficient in improving plant genetic make-up than the old hit-and-miss technology currently in use. Phytodyne scientists have seen results far more efficient at gene targeting than current methods. Voytas expects the technology to be implemented in two crops within the next two years.

For more details, please visit: http://www.iastate.edu.

NEW GERMPLASM PROMISES HEALTHIER SOYBEAN OILS

USDA Agricultural Research Service scientists have developed a new germplasm that could pave the way in producing oils that have heart healthy levels of monounsaturated fats and could shortly become a strong contender of olive oil. The new germplasm, called N98-4445A, was developed through traditional breeding methods by scientists from the ARS Soybean and Nitrogen Fixation Research Laboratory in Raleigh, North Carolina. Led by agronomist Joseph W. Burton, the research team considers the new germplasm as an invaluable genetic resource for producing mid-oleic soybean varieties suitable for different growing regions. Oil from N98-4445A contains augmented levels of oleic acid, a monounsaturated

fat stable enough for use in salad dressings or frying oils without undergoing hydrogenation.

Increased oleic acid levels also translate to a decrease in polyunsaturated fatty acids (PUFA). PUFAs are liquid fats (e.g. linolenic and linoleic acids) that are known to produce undesirable odors and break down when oxidized during aging or frying. Moreover, the new line of oils has only 3 percent PUFA as compared to commercial soy oils that contain 7 percent linolenic acid. These new oils also fall below a critical cut-off point under which no hydrogenation is necessary.

By 2006, U.S. Food and Drug Administration would require food manufacturers to state the amount of trans fatty acids in processed foods. The processed-food industry uses tons of vegetable oils annually and about half of all vegetable oils produced are from soybeans.

The full story is available at
http://www.ars.usda.gov/is/AR/archive/feb04/soy0204.htm

BIODIVERSITY FOR DEVELOPMENT

In a paper entitled ”Conserving biodiversity for development,” Mark Malloch Brown, administrator of the United Nations Development Program (UNDP), underscored the importance of conserving diversity in achieving development. The author stated that biodiversity is a key development issue and frequently provides the ‘welfare system of last resort’ for poor people and communities.

Citing the Millennium Development Goals (MDGs) as a means for the international community to improve the living conditions of the poorest of the poor, the author highlighted the role of biodiversity under the seventh MDG. The Millennium Development Goals are time-bound and measurable goals and targets for combating disease, illiteracy, environmental degradation, and discrimination against women with the ultimate aim of halving extreme poverty and hunger.

Brown also stated that an opportunity lies with the poor as most of the world’s biodiversity exists in the economically poor countries. Hence, the author recognizes the prospect of enhancing poor people’s income by permeating markets for sustainable produce, forest and agricultural products, as well as ecotourism.

The author concluded that there is indeed a real opportunity to advance all the MDGs without undermining ecological capital. However, he stressed that this will only happen when we recognize that poor communities are at stake in safeguarding their own ecosystems as well as meeting their basic needs. Brown ended his paper by explaining that the real key to a sustainable future is to make mutually reinforcing efforts towards poverty reduction and conservation.

The full article is available at
http://www.scidev.net/Opinions/index.cfm?fuseaction=readOpinions&itemid=240&language=1.

ANNOUNCEMENTS:

BBI'S GRANTS PROGRAM – CALL FOR PROPOSALS

Grant applications for research projects on the effects of agricultural biotechnology on biodiversity in developing countries are currently accepted by USAID thru its Biotechnology Biodiversity Interface (BBI) program. Grant proposals are accepted until April 15, 2004. For more information, email Dr. Hector Quemada at hdquemada@croptechnology.com.

WORKSHOP ON DETECTION OF PROTEIN/DNA IN BIOTECH FOODS

A Workshop on Detection of Protein and/or DNA in Foods Derived from Modern Biotechnology will be held in Budapest, Hungary, on March 5, 2004. The workshop will be facilitated by the Food and Agriculture Organization (FAO), World Health Organization (WHO), in collaboration with ILSI and will be held prior to the Codex Committee on Methods of Analysis and Sampling (CCMAS). All delegates attending the CCMAS meeting are also invited to attend this free workshop.

For more details, please contact: food-quality@fao.org.

3RD INTERNATIONAL CONGRESS ON PLANT METABOLOMICS

The 3rd International Congress on Plant Metabolomics will be held on June 3-6, 2004 during the 6th Annual Plant Sciences Institute Symposium. Sponsored by the Department of Biochemistry, Biophysics and Molecular Biology, and the Plant Sciences Institute, Iowa State University at Ames, Iowa, the congress will address the current and potential applications of metabolomics for gene discovery and directed genome modifications as well as other Plant Metabolomics themes. The said event will be held at the Scheman Building, Iowa State Center at the Iowa State University.

To register, use the ISU registration form at http://www.bb.iastate.edu/~gfst/phomepg.html.

11TH INTERNATIONAL LUPIN CONFERENCE

The 11th International Lupin Conference will be held in Guadalajara, Jalisco, Mexico from May 4-9, 2004. The first circular can be obtained at http://www.cucba.udg.mx/eventos/lupinus/lupinus.html. For more details, email pgarcia@cucba.udg.mx.

To stop receiving this newsletter, please
send an e-mail message to knowledge.center@isaaa.org and write, "unsubscribe newsletter" in the subject box.

Do not hesitate to tell other colleagues/contacts about this mail list. If they wish to join, they should send an e-mail message to knowledge.center@isaaa.org

leaving the subject blank and entering the one-line text message as follows:
SUBSCRIBE Crop Biotech Network

Please visit CropBiotech Net web pages (www.isaaa.org/kc) to view previous issues of this newsletter and see other available resources for download.