

Where Nature and Science Meet

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Vol. 60

June 2004

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Small-scale farmers get technology boost in Africa

Kimani Chege, SciDev.Net, 18 Jun 04. From AgBioView 23 Jun 04 (shortened)

<http://www.scidev.net/gateways/index.cfm?fuseaction=readitem&rgwid=4&item=News&itemid=1435&language=1>

Access by small-scale farmers in Africa to agriculture technology was given a boost this week when Kenya's agriculture minister Kipruto Arap Kirwa officially launched the African Agricultural Technology Foundation (AATF). The foundation is a public-private partnership that aims to boost incomes and food security for the rural poor in sub-Saharan Africa by promoting both classical plant breeding approaches and novel GM approaches. The AATF hopes in particular to overcome the high costs and restrictions imposed by intellectual property rights that act as barriers to African farmers' adoption of new technology. It will do this by seeking to obtain royalty-free licenses from producers of agricultural technologies and to adapt such technologies to African needs.

AATF was formed last year after consultations between Africa scientists and their counterparts in Europe and America. The foundation's official opening follows the recent appointment of its first executive director Mpoko Bokanga, who assumed office this week. He joins AATF from the Regional Industrial Development Centre of the United Nations Industrial Development Organization (UNIDO) in Abuja, Nigeria. "The African Agricultural Technology Foundation will work with you all, not to duplicate the good work that is being done, but to facilitate new partnerships and innovative linkages, and bring technologies that increase productivity within the reach of African farmers," Bokanga told the launch audience. Bokanga said the foundation's top priorities included combating 'witch weed'. The pest is estimated to cause US\$7 billion of crop damage in Africa each year, depriving over one million of food, and reducing the income of many small-scale farmers.

The organisation is also working with the Mexico-based International Research Centre for Maize and Wheat (CIMMYT), the Kenya Agricultural Research Institute and the Syngenta Foundation to introduce a variety of maize resistant to the stem borer - a major insect pest. Other projects include enhancement of vitamin A in maize to counter nutritional problems of dietary vitamin deficiency and an initiative to increase cowpea productivity in sub-Saharan Africa. Funding for the initiative comes from the Rockefeller Foundation, the US Agency for International Development and the UK Department for International Development.

Agricultural conference to address West African food shortage

Voice of America, 18 Jun 04. From AgBioView 21 Jun 04 (shortened)

<http://www.voanews.com/article.cfm?objectID=1770ACA9-C623-4B21-8F5EDCA5AB700679>

The human and economic costs of Africa's food crisis are staggering. Poverty and lack of food force 1 out of every 3 people to go hungry. An upcoming conference in West Africa will examine technology as a way to help farmers in that region of the continent. In an effort to better feed West Africa's 226 million people, the US and Burkina Faso governments are co-sponsoring an agricultural science conference in Ouagadougou, Burkina Faso's capital. US Agriculture Department official JB Penn says the focus is on using science and technology to increase food production in West Africa. "We recognize that technology is not an end in and of itself," he says. "It's developed to serve people and their needs. And this conference is a response to the needs of hundreds of millions of people who simply don't have enough food. It's a response to farmers who are struggling to grow enough food first to feed themselves and then enough to earn income to feed their families." Hunger is continent-wide in Africa. Mr Penn says the meeting focuses on West African countries because they have established some political security. "Investment is only going to flow into places where there is some safety and security, and good government," he added.

Ghana-based agricultural scientist Walter Alhassan welcomes the attention on West Africa. He is the West African coordinator for the Agricultural Biotechnology Support Project Two, a public-private consortium promoting research and policy development. Mr. Alhassan says technology needs to help farmers not only grow more food, but also find better ways to store it and bring it to market. "We think it's a very good opportunity since it brings together policymakers at the very high levels," he explains. "When there's a buy-in at that level, it facilitates the development of the technology." Officials will discuss water management, biotechnology and regulatory policies to fight drought, crop diseases, and barren soil.

Mr Penn says that rather than looking at new inventions, policymakers will concentrate on making existing technologies more usable. "It may be better seed varieties, better planning practices, better processing techniques or better ways of irrigating crops," he notes. "Whatever the technology, it needs to be affordable, appropriate, and accessible." Mr Penn says the conference will not address the controversial subsidies the US government pays to American farmers and crop buyers. Many Africans are critical of these subsidies, saying the price breaks out-compete West African growers, especially in cotton. The US farm official says the place to discuss foreign subsidies is at the World Trade Organization (WTO).

The Ouagadougou conference teams several US government groups with West African economic and agricultural organizations like ECOWAS, the Economic Community of West African States. Mr Penn thinks that the West African meeting will improve regional communication. The US Agriculture Department is expected to sign an agreement with a new group called the African Agricultural Technology Foundation to enable technology transfer to West African scientists. "This foundation we see as a device that will help us facilitate the dissemination of the technology," Mr Penn adds. "We can deal with the foundation. The foundation in turn can deal with all the member countries that it represents." In Ghana, Walter Alhassan says better science is just one part of the solution for West African farmers. He points out that for all but the richest farmers, the cost of advanced methods eats into profits. He believes countries should subsidize fertilizers and other supplies and make policies that support the new technologies. Mr Alhassan also says more must be done to get farmers to accept the technologies. There has been particular resistance to genetically engineering plants to stave off disease. "The resistance is out of ignorance," he states. "We need to do more public enlightenment to disabuse the minds of people of the perceived dangers of the use of GMOs." The West African meeting is modelled after a Central American regional conference.

Farming initiative for Africa launched

Konchora Guracha, The East African Standard (Nairobi), 17 Jun 04. From AgBioView 17 Jun 04 (shortened)
<http://allafrica.com/stories/200406160970.html>

An initiative was launched yesterday to increase productivity among Africa's small-scale farmers. The African Agricultural Technological Foundation (AATF) plans to spearhead transfer of agricultural technology as a way of addressing Africa's perennial food insecurity. Already, AATF has showcased 4 out of the original 8 areas of problems it identified as control of the devastating striga weed (wipes out tracts of African farmlands, depriving more than 100 million people of staple food), development of insect resistant maize, pro-vitamin A enhancement in maize and rice, and cowpea production.

"The foundation will facilitate the transfer of these technologies and make them available to farmers at the most reasonable cost. Our current focus is on food crops, but we will later target cash crops, and, possibly, livestock products," said Dr Eugene Terry, AATF implementing director. Headed by Dr Mpoko Bokanga, a food scientist from the Democratic Republic of Congo, the foundation is the result of a two-year consultation between African, North American and European scientists on the one hand and stakeholders on the other. Agriculture minister Kipruto Arap Kirwa said Africa should be given the opportunity to make informed decisions on the use and application of GMOs and agricultural technologies. "Of particular attention in the range of available technologies is the question of biotechnology, and, specifically, GMOs. Africans should be accorded the opportunity to decide what to do about some of these technologies," said Kirwa.

At the same time, the minister criticised opponents of agricultural technologies like GMOs, saying some spoke from a position of misinformation. "The issue of technology transfer always attracts debate at different levels. For a number of us, especially, the small-holder farmers, technology paints an image of complicated science that should be approached with suspicion." He added: "My stand is that technological solutions to human problems should be approached soberly and with as little emotion as possible. It is imprudent to make generalised statements on these issues."

Taking issue with eco-fundamentalists

Terry Mackenzie-Hoy, Engineering News, 11-17 Jun 04

I once sent Scope magazine an article on lead-free petrol. The article informed the public how the price structure of petrol would change and how the different petrols would be different colours and so on. Not long after I received a subedited version of my article for "my approval". I read the new version and was startled. It was full of foul language and was very abusive. It began something like: "So, just when you thought the f... government wasn't going to f... with your life...read on!" I was quite surprised. So I phoned the editor. He passed me on to his chief subeditor who said that my article was too tame. So he "spiced it up a bit" to "tell the public how it really is". While destroying its sense and misleading the public? Oh, quite. So I told him, "publish it but without my name attached". Which they did.

I raise this because of the steady rise of "eco-fascists" in the world and in this country. A fascist is by definition a politically organised authoritarian who wishes to stamp their view by any means on a group of people; an eco-fascist is somebody who wishes by any means to stamp their view of "saving the planet" on a group of people, specifically the whole world. The eco-fascists are on the increase. Their views are simple: All nuclear power is bad, all coal generation is bad, all mining is bad, and wind power, solar power, wave power and biogas power are good. They are "stamping their views". To do this is very much simpler than it sounds – their line of attack is by printed articles and conferences to capture the thoughts of the common person.

The eco-fascists generally produce their own magazines or write articles for popular magazines and in these articles they write with some conviction about the goodness of this and that, and quite often they present a picture which displays hopelessly flawed thinking or is just quite false by the fact of omission of vital information. All of these articles are supposed to make your heart feel warm when you realise that, yes, there is someone who will stop nuclear power (and thus the bomb) or oil exploration (and thus the Exxon Valdez).

When a sufficient number of these articles appear or when they are quite, quite, wrong, very often a learned individual writes in to the magazine to set the record straight. Normally the letter is not at all of the attacking type; just "record straight setting" in nature in that mW stands for Milliwatts and not Megawatts, voltage is in Kv not Kva or that you'd have to use the entire Durban waste landfill to get enough biogas to power just one of the suburbs. Here is where the true authoritarian nature of the eco-fascists comes to the fore – the letter is either not printed or it is printed in such a way so as to destroy or make silly some of the meaning (probably by an ex-Scope magazine subeditor). Often a smart comment from the editor is added so the readers can see what sort of whistle-brain wrote in to correct the original eco-article. The eco-fascists do not care about this.

Firstly, the eco-fascists need not have any scientific or technical qualifications. Their cause is that of the common woman or man. Such people do not need science to know what is right. Secondly, as is well espoused by the eco-fascists, every scientist or engineer is a suspect character – trying to protect their own interests or (more likely) keeping their hush money to themselves. The eco-fascists are well supported in their view of scientists and engineers by the media. Every so often there's a programme where the building falls down, the turbine blows up, the bridge fails, the virus escapes, the plant mutates, the poison leaks from the factory into the drinking water, the power line falls over in the wind...all of which are saying...beware of technical people: they are not to be trusted.

All of this would be harmless enough if it wasn't for the fact that governments get the wrong message from the eco-fascists and do wrong, expensive things, which don't really help the majority of the community at all: things like putting in solar panels instead of single-wire earth return power lines; things like delaying nuclear projects in favour of giving people solar geysers. Our government and many others are guilty of this. It is important that all people, technical and nontechnical, realise that, on matters of ecology, the eco-fascists are not necessarily right. Get the facts. Ask qualified people who really know. Otherwise you may just be reading an edited version of the truth...

EU moratorium on GM products

Legal and Regulatory Affairs Monitor. Vol 3 Issue 2. Jun 04 (shortened)

The International Chamber of Commerce (ICC) is the largest, most representative business organisation in the world, with thousands of member companies in over 130 countries, spanning every sector of private enterprise, including those particularly interested in the successful integration of modern biotechnology and the life sciences for the benefit of society and the environment. The ICC joins other business organisations, including the Union of Industrial and Employers' Confederations of Europe (UNICE), in urging the European Commission to lift the *de facto* 'moratorium' on the authorisation of GM products, which has been in force since 1998.

In advance of EU Ministers voting on pending applications, ICC supports the Commission's approach outlined in its Communication of 28 Jan 04 and encourages the Commission to move forward with approval of such technologies and their products in the EU. Businesses in all parts of the world have been negatively affected by the moratorium, both in terms of its impact on trade and the dampening effect on research and innovation. The worldwide loss has been estimated at US\$43 to \$167 billion a year by the year 2015. Despite the establishment of the European Food Safety Agency and its recent reports validating the safety of GMO products, the European Commission has been unable to garner a qualified majority of votes to approve applications of products which have been affected by the moratorium for the past 5 years.

Furthermore, the conditions previously articulated by a number of the Member States to remove the moratorium, specifically the adoption of 2 new regulations on the labelling and traceability of GMO products, have been met. Although these regulations pose excessive and scientifically baseless regulatory burdens that will continue to impede trade throughout the food chain, they clearly satisfy the publicly expressed expectations of the Member States. It is now time for the EU to demonstrate that its regulatory regime is being properly applied and implemented in a transparent, scientific and rational manner.

Precaution

ICC has published a comprehensive policy statement on Precaution, science, risk and trade, which clearly lays out the conditions under which emerging technologies should be adopted, on the basis of established case-by-case scientific risk assessment, and in an appropriate regulatory system to ensure consumer safety for consumption of products of agricultural biotechnology.

Scientifically sound regulatory approach

The "ICC Global Roadmap on Modern Biotechnology" presents a framework within which the necessary decisions can be made by business and governments to balance developing the technology in order to realize its potential to tackle threats to human health and sustainable development with the ability to address societal concerns about food and environmental safety. Many of the key conditions of this framework have already been met, such as the creation of a scientifically sound regulatory approach to risk assessment and risk management which serves to build trust among users and consumers and examine potential environmental issues.

However, the moratorium runs counter to the fundamental principles we argue should govern biotechnology oversight, including hampering innovation by stifling the development of new products, restricting market access and disrupting trade by disregarding WTO rules. Modern biotechnology offers encouraging prospects for the future, one in which we can cure more diseases, feed the world's population, and protect the environment. But these new hopes bring new responsibilities on governments, business and society in general to meet the challenges posed. In order to realise the benefits of biotechnology for the good of humans and the environment, it is time to make wise decisions.

EU: Most animal feed will carry GM-labels

Europe Information Service, 9 June 04. Via AgBioView 9 Jun 04

EU feed manufacturers will have to label most of their compound feed products as containing GMOs, the European feed manufacturers' association FEFAC said on 4 June. It estimates that 95% of compound feed produced in the EU contains some GM material. Europe can only produce around 20% of the protein crops it needs so compound feed makers often add imported soybean meal or maize gluten feed in small amounts for nutritionally balanced animal feed. Both products are usually derived from GM maize and soya grown in North and South America. New GM labelling rules which came into force obliges manufacturers to indicate when feed contains more than 0.9% GM material.

FEFAC Secretary-General Alexander Doring emphasised that 92% of all animal feed in the EU is not GM. But compound feed, made from a variety of different crops, often contains small amounts of GMOs. Compound feed only supplies one-third (140 million tonnes) of the EU's total 500-million tonne feed requirements. Half of all animal feed is home-grown forage and the rest is made up of home-produced cereals such as wheat, barley or rye. These are non-GM plants grown in the EU. Mr Doring said this is not a new issue for the sector which has had to live with its dependence on GM-dominated imports for the past 8 years. But he said it was difficult to label feed as 'non-GM' because there is no legal distinction between feed without any GMOs and feed containing small amounts of GMOs under the 0.9% threshold, he said.

FEFAC had asked the Council and the Parliament to clarify this issue without success. The EU does produce protein crops for feed such as peas, field beans and also uses rape meal, a by-product of oilseed processing. Farmers are more likely to grow their own feed in North and North-Western Europe. Compound feed is far more frequently used by farmers in Southern Europe, Mr Doring said. The vast majority of the protein crops used by the feed industry come from the Americas where acreage under GM-crops is increasing. For example, FEFAC estimates that 80% of the soybeans imported from the US and Canada for feed must be labelled.

Proportion of imported feed materials likely to fall under GM-feed and food legislation:

- **GM-soybeans (2003): 80% in US and Canada, 95% in Argentina, 35% in Brazil**
- **GM-rapeseed: 70% in US and Canada**
- **GM-maize: 40% in US, 35% in Argentina, 30% in Canada**

All figures are approximate (FEFAC, 2004).

The European compound feed industry only uses authorised feeding stuffs for the production of compound feed, FEFAC said. The only biotech crops that are on sale in the EU have undergone a thorough safety approval process. There is no proof that feeding animals GM-products has any effect on animal tissue. This was why legislators decided not to insist on GM-labelling for meat from animals given GM-feed.

Europe: New technology platform for plant biotechnology

Cordis News, 24 June 04. From AgBioView 26 Jun 04 (shortened)

Research Commissioner Philippe Busquin has endorsed a 20-year vision for the future of plant biotechnology in Europe, drawn up by representatives from industry, research, agriculture and consumer organisations and presented to him in Brussels on 24 June. The vision paper represents the first step in establishing a technology platform on plant biotechnology over the coming months. The technology platform will comprise the stakeholders that developed the vision as well as Member State representatives and other experts. Its main task will be to develop a strategic research agenda for the sector.

'Today, in the face of important challenges at the European and global levels, we must pay renewed attention to plants,' writes Mr Busquin in a foreword to the vision document. 'A growing world population has to be fed, and increasing demands for high quality, safe and affordable food have to be met. The transition to a sustainable economy based largely on renewable resources, the 'bio-based' economy, is as inevitable as it is desirable.'

Other high level personalities to endorse the vision besides Mr Busquin included Feike Sijbesma, president of the European association for bioindustries, EuropaBio, and Andrzej Legocki, president of the Polish Academy of Sciences. During a press conference to present the document, Professor Legocki reminded journalists that in past decades it was European researchers who pioneered plant biotechnology, adding that now is the time to apply that knowledge for the benefit of European consumers, industry and agriculture.

'We must launch programmes aimed at carrying out research in key areas, and public-private partnerships should be initiated to develop novel products,' said Professor Legocki. He revealed that the work of the technology platform would follow a road map based on 3 strategic priorities: producing better quality, healthy and affordable food; promoting agricultural and environmental sustainability; and enhancing European competitiveness through the promotion of basic research.

The vision outlines both short to medium and medium to long term milestones for plant biotechnology in Europe. By 2015, it foresees the creation of basic plant genomics research programmes for the major EU grown crops, projects focused on improving the nutrition of food and feed, and public-private partnerships to develop agricultural, food, energy and biomaterials products. Looking ahead to 2025, the vision is of a comprehensive genomics knowledge base covering all strategically important crops in the EU, superior crop varieties to meet consumer and environmental needs, and partnerships with developing countries to help promote self sufficiency and competitiveness.

Other challenges to be met through research include increasing biodiversity, reducing the environmental impact of agriculture, improving coexistence and developing more efficient bio-fuels. Commissioner Busquin said that he was happy to lend his support to the initiative for a number of reasons. He highlighted the huge economic importance of plants and plant derived products for Europe, but at the same time pointed to stalling investment and the worrying exodus of biotech researchers and companies from the continent. When it was suggested that the vision for the technology platform had come 5 or 10 years too late to reverse these trends, however, Mr Busquin disagreed: 'We are not starting from scratch. Much research is already being carried out under the 'Food safety' priority and through the ERA-NET project on plant genomics, but we do need to make an effort to stimulate research in this area.'

Dr Indridi Benediktsson was one of the Commission's representatives in the group that drew up the vision paper and CORDIS News asked him whether he agreed with this assessment. 'I think the technology platform comes at just the right time, because we now have the necessary legislative framework in place, the required political will, and the support of the biotechnology and research sectors.' All of those present were at pains to make clear that this is not a vision to promote GMOs, though GMOs would not be excluded from the agenda. They also stressed that the concerns and views of consumers would be heard in the process through the participation of consumer organisations in the platform.

However, the Commissioner was asked why no anti-GM lobbies had been included in the platform to reflect a view shared by many Europeans. 'This platform is for R&D stakeholders, and therefore we are not obliged to invite those who don't have expertise in research. The Commission will continue to consult with NGOs non-governmental organisations and environmental organisations, but those who wish to achieve progress in this area must be free to work together.' Mr Busquin added that Europe has the strictest legislative regime in the world when it comes to GMOs, and that consumers would always be able to make the choice between GM and conventional foods through the EU's new labelling system.

Europe's vision for plant biotechnology was also welcomed by Professor Mohamed Hassan, executive director of the third world academy of sciences. He said that increased partnership with Europe would offer developing countries, particularly in Africa, the opportunity to build their capacity in this sector. 'Many countries are doing very little in this area as they don't have the scientific capacity to make a judgement about the technology themselves.' He argued that by equipping them with the resources to carry out the labour and time intensive practice of genetic sequencing, for instance, developing countries could build their scientific infrastructure and make a contribution to the global research effort. 'Let us not forget that the majority of the world's plant biodiversity is located in some of the poorest countries,' concluded Professor Hassan. Armed with a vision of the challenges and milestones that lay ahead, the Commission hopes that the plant biotechnology industry in Europe now has the basis it needs to secure its future competitiveness.

To read the vision document, please consult the following web address:

<http://www.epsoweb.org/catalog/TP/index.htm>. To find out more about the Commission's biotechnology activities, please visit: <http://europa.eu.int/comm/biotechnology/>

Canada and agriculture in development

CIDA Backgrounder, 29 Oct 03 (shortened)

http://www.acdi-cida.gc.ca/cida_ind.nsf/0/c4b0f01916d6ec2285256dce00572b2c?OpenDocument.

The international community recognizes that agriculture is central to rural development, with strong links to health, education, water, the environment, and the private sector. Managing these relationships helps ensure that rural development is integrated, equitable, and sustainable. This is reflected in Canada's renewed focus on agriculture in rural development, as outlined in a policy document released this year by the Canadian International Development Agency (CIDA) — "Promoting Sustainable Rural Development Through Agriculture: Canada Making a Difference in the World."

This is also reflected in Canada's relationship with the Consultative Group on International Agricultural Research (CGIAR), an association of public and private organizations that mobilizes cutting-edge science to reduce hunger and poverty, improve human nutrition and health, and protect the environment through a network of 16 research centres working in more than 100 countries. CIDA is supporting several research initiatives managed by several member organizations of CGIAR. These include:

- \$19.9 million over 5 years to support the International Livestock Research Institute (ILRI) and other CGIAR partners. This contribution will be used to help the government of Ethiopia improve agriculture and rural development.
- \$30 million announced by the Prime Minister for the establishment of a Centre of Excellence in Biosciences for Africa. ILRI is leading the development of this centre as an initiative under NEPAD.

- \$10 million over 10 years to the Global Crop Diversity Trust to sustain funding for the gene banks, the safe repositories of crop varieties that ensure the crop diversity that is essential to food security in Africa. The trust is set up as an independent entity under international law with governments as signatories.
- \$7.5 million over 5 years to the Pan-African Bean Research Alliance, based in Kampala, Uganda, to enhance the nutritional productivity from bean-based technologies available to poor rural communities in Central, Eastern and Southern Africa, as well as the capacity of communities and households to manage their own livelihoods and capitalize on new agricultural technology.
- \$7 million over 5 years to the International Institute of Tropical Agriculture, based in Ibadan, Nigeria, to improve farmers' knowledge of crop varieties, land management practices, post-harvest technologies and crop-livestock systems. The funds will also promote sustainable land, crop, and livestock management and will improve market access and agricultural policy in Nigeria's Borno State.
- \$3 million over 3 years to the Forum for Agricultural Research in Africa (FARA), an umbrella organization that brings together coalitions of major stakeholders in agricultural research and development in Africa. FARA plays advocacy and coordination roles for agricultural research for development.
- 3 million over 3 years to the Global Forum on Agricultural Research, a group that advocates conservation of natural resources to help reduce poverty and increase food security.
- An increase of \$5 million to the annual \$26 million Canadian contribution to CGIAR's core funding, including support from the Canada Fund for Africa.

Biotech expo showcases India's talents

SIFY Finance, 9 June 04. Via AgBioView 10 Jun 04 (shortened)

<http://sify.com/finance/fullstory.php?id=13494034>

The fledgling biotechnology industry is already reinventing itself as an economic booster in emerging countries. To this end research scientist Kiran Sharma expects India will develop an edible vaccine against cholera within 5 years. And Weiping Yang is working on "biochip" technology at a new company in China to wed molecules with computers in systems to detect infectious viruses like SARS. India and China are among 59 foreign countries and 16 000 scientists, executives and government officials crowding into 3 big meeting halls for the BIO 2004 Annual International Convention in San Francisco. The forum first began in 1993.

"We always had strong international representation from Canada, Great Britain, France and Germany, but nothing like we have now," said Dan Eramian, a spokesman for the Biotechnology Industry Association, which organizes the conference. The number of countries attending has doubled since 1999. "More countries now see building biotech industries as a way to strengthen their economies." Eramian added.

The global biotechnology industry posted about \$47 billion in revenues last year, according to a study by the Ernst & Young accounting firm. "We have 2 goals here," said BP Acharya, secretary of Industries and Commerce in the Andhra Pradesh government in India: "Showcase what is happening in biotechnology in India to change the view that the industry is all US and Europe. And take advantage of the networking opportunities for new business." Acharya, who is promoting "Genome Valley" in southeast India as the nation's biotech hub, attended the 2001 convention in San Diego alone. At this week's conference, however, he has 30 colleagues to help him scout for new business and take part in scientific presentations. India's total delegation numbers 89.

Vaccine in a peanut - Indian scientists with the International Crops Research Institute are linking life sciences and agriculture to develop edible vaccines against polio, cholera and other diseases that could be delivered in peanuts or other plants at greatly reduced costs, said Sharma. The Centres for Disease Control in Atlanta has expressed interest in the work, said Acharya.

Yang said 4 biotech companies from China attended the San Francisco meeting and "visa problems" prevented 4 more from showing up. This was the first year that China had its own "pavilion" on the convention floor to present technologies. Beijing-based three-year-old Capital Biochip Corp., part of China's National Engineering Research Centre, is developing a range of medical detection systems founded on biochips, electronic devices that use organic molecules and form a semiconductor. The technology can examine tens of thousands of genes in a scanning system in 10 minutes versus years in conventional detection systems, Yang said.

"We have developed some interesting leads from companies in the US and Europe who are interested in our overall technology," he said. This year's conference also signed up 11 new member nations: Algeria, Armenia, Ivory Coast, Kazakhstan, Lithuania, Peru, Romania, Slovenia, Uganda, Ukraine and Yemen. Wales also had 9 biotech companies and research organizations represented at its pavilion. Bioscience in Wales is developing healthcare diagnostic systems, clinical trials for cancer drugs and chronic wound treatments, medical devices and instruments, and doing research in grassland-based livestock agriculture, said Bob Wallis, research manager for the Welsh Development Agency. Closer to home, 28 US states set up pavilions to vie for business leads, contracts and jobs.

Malaysian PM meets biotech top guns

Syed Nazri, New Straits Times (Malaysia), 10 Jun 04. Via AgBioView 10 Jun 04 (shortened)

Malaysia may see its biggest gains yet in the rapidly-growing biotechnology industry following Prime Minister Datuk Seri Abdullah Ahmad Badawi's meeting with some of the biggest names in the business yesterday. Abdullah, here on a private visit, met 15 of the top executives of biotechnology firms over lunch and seemed pleased that most were keen to invest in Malaysia. It was part of a brief but significant appearance by Abdullah at the on-going Biotech 2004 Exhibition here, one that was seen as a clear signal of the Malaysian Government's support and commitment towards business in biotechnology.

The 15 bigwigs included Dr Mark Ahn (Hudson Health Science Centre president and CEO), Elliot Entis (Aqua Bounty Technologies Inc president and CEO), Dr Robert Fraley (Monsanto executive vice-president), Dr William Johnston (Inhibitex president and CEO), Jeremy Levin (Novartis Institutes head of strategic alliances), David Raisbeck (Cargill Inc vice-chairman), Dr Roger Wyse (Burrill and Co managing partner) and Craig Wheeler (Chiron BioPharmaceuticals president).

Abdullah told Malaysian journalists later that he was confident the firms would seriously consider investing in Malaysia as the industry had strong Government backing. He said he took the opportunity to sell Malaysia as a place for them to expand their businesses and set up research and development facilities. A few of the companies, he noted, had already established links with partners in Malaysia while the rest were expected to touch base soon. "I also explained to them that biotechnology had great potential in Malaysia and it could be a catalyst for new growth areas in the country's economy as well as a source of new wealth and income for the people," he added. Abdullah said the growth in biotechnology would suit Malaysia's diversified economy well. "Biotech is useful in many areas: agriculture, livestock farming, herbal industry and traditional and modern medicine. "Its potential in the pharmaceutical industry is also unlimited," he said. Abdullah, who earlier spent more than 2 hours visiting booths at the exhibition, said he was amazed by the products and potential of biotechnology.

Malaysia is one of the 59 countries taking part in the Bio 2004 convention and one of the 28 participating in the exhibition. The country's delegation, comprising a mix of both government and private sector officials, is headed by Science, Technology and Innovation Minister Datuk Dr Jamaluddin Jarjis. Meanwhile, Bernama reported that Abdullah's presence at the annual event was hailed by top corporate officials from American biotechnology firms. They said it reflected his commitment to oversee the growth of the industry in Malaysia. Covenance Business Development vice-president Peter Varney said: "It demonstrated enormous commitment on the part of Malaysia to this industry." Biogen Idec Strategic Initiatives vice-president Gunther Winkler said: "It sends a fantastic signal not only to US biotech firms, but also those of the world that Malaysia is pro-business and not just open to business. "Malaysia really regards doing business internationally and especially with the biotech community as the most important agenda. "The Prime Minister is here speaking to us and this really sends a very important signal."

New GM orchids from Malaysia

Crop Biotech Update, 18 Jun 04 (shortened)

The Malaysian Agricultural Research and Development Institute (MARDI) are currently bio-engineering orchids to produce varieties with unique colours such as deep red and dark blue. According to the New Strait Times (Malaysia), as cited by the Pew Initiative on Food and Biotechnology, this research is currently being undertaken by the research centre to meet the growing demand for orchids. In Malaysia, orchid exports presently bring in about RM150 million a year.

To create such varieties, scientists transfer genetic material or genes into single orchid cells. This technology allows them to develop hybrids with novel characteristics such as vivid colors, which are impossible to create using conventional methods such as pollination. MARDI is also doing research on extending the flowers' shelf life and improving their shape and structure and resistance to diseases.

Says Dr Umi Kalsom Abu Bakar, deputy director of MARDI's biotechnology centre, "once these (flowers) have bloomed, we will be able to analyze them to know how colours are formed in orchids and where we need to genetically enhance them to get the desired colours. This will add value to the orchids. Farmers can generate more income while consumers will have more variety and better quality hybrids."

The news story is found at <http://pewagbiotech.org/newsroom/summaries/display.php3?NewsID=687>. More news from the New Strait Times (Malaysia) at <http://www.nst.com.my/>.

GM crops to make petrol

Simon Collins, 7 Jun 04, New Zealand Herald, COPYRIGHT © NEW ZEALAND HERALD
http://www.agbios.com/static/news/NEWSID_5582.php Via BIC 11 Jun 04 (shortened)

A New Zealand-educated scientist is playing a key role in an American project to genetically engineer maize and soybeans to make petrol. Professor Basil Nikolau, a Greek who was born in Turkey and educated at Palmerston North Boys High School and Massey University, says the plan would use up US grain surpluses. It might also help to reduce global warming, because it would merely recycle carbon absorbed from the air by the plants and emitted again when the plant-based fuel is burned.

In effect, it would speed up fuel production by millions of years – the time it now takes for dead plant material to turn into coal, oil or gas underground. Auckland-based AgriGenesis and Rotorua's Forest Research are among many other groups around the world that believe plant-based energy could be the next big wave in biotechnology, along with continued use of genetics in the medical area where the technology began. But Forest Research's chief operating officer, Tom Richardson, who met Dr Nikolau in Iowa last Friday, said New Zealand's first steps in the field were more likely to be in creating pelletised fuels, rather than oils. Dr Nikolau has been keen to collaborate with New Zealand scientists since he left to take up a post-doctoral fellowship in the US in 1982, and wants to use New Zealand's expertise in trees. As director of the Centre for Designer Crops at Iowa State University, he leads teams looking for the genes that control starch production in maize and determine the balance of oil and protein in soybeans.

FAO response to open letter from NGOs

UN Food and Agriculture Organization, 16 Jun 04. From AgBioView 18 Jun 04
<http://www.fao.org/newsroom/en/news/2004/46429/index.html>

FAO Director-General Dr Jacques Diouf has sent the following letter to NGOs in response to their criticism of FAO's recent State of Food and Agriculture report. It has come to my attention that an open letter addressed to me is circulating on the internet for signature by NGOs and other members of civil society. This open letter appears to be in response to misleading press headlines and a mistaken interpretation of FAO's recent report, "Agricultural biotechnology: meeting the needs of the poor?" in the 2003-04 issue of The State of Food and Agriculture.

Those of you who have seen this open letter are urged to read my speech introducing the report and the report itself, rather than relying on secondary interpretations of this very important and complex subject. Therefore, I am transmitting to you the full text of my speech. The full report is available in Arabic, Chinese, English, French and Spanish at <http://www.fao.org/documents/index.asp>. Readers are further asked to consider that while this report emphasizes biotechnology, it is not meant to represent all components of FAO's broad mandate and commitment to promote agricultural development and alleviate hunger.

The open letter mentions several points that require clarification regarding FAO's working methods and our position on agricultural biotechnology, particularly transgenic crops.

1. The State of Food and Agriculture has been published every year since 1947. The report examines key developments in food and agriculture at the global, regional and national levels and provides in-depth analysis of important issues shaping food and agriculture. It reflects the views of the most known specialists of Member States on the subject. FAO has always respected scientific viewpoints in its reports but, as is always the case in controversial subjects, there are differences of opinion.

2. As regards biotechnology, I should point out that FAO's position is determined by its competent statutory bodies under the guidance of the FAO Conference and of Summits of Heads of State and Government. For instance:

* The FAO/WHO Codex Alimentarius has agreed on the principles and guidelines for assessing health risks related to foods derived from modern biotechnology. Foods derived from the GM crops currently being grown have been evaluated according to existing procedures for risk assessment and have been deemed to be safe to eat. However, the absence of evidence of harm to human health from the consumption of foods derived from GMOs is not a guarantee that they are completely safe; therefore FAO recommends continued monitoring and refinement of risk assessment procedures;

* The FAO/WHO Codex Alimentarius Ad Hoc Intergovernmental Task Force on Foods Derived from Biotechnology, open to all Member Nations is the body responsible at international level to elaborate standards, guidelines or other principles, as appropriate, for foods derived from biotechnology;

* FAO has recently published the guidelines adopted by the 130 Members of the International Plant Protection Convention for pest-risk analysis for living modified organisms. Such agreements can help harmonize regulatory procedures globally.

3. As far as food sovereignty is concerned, FAO negotiated for 7 years to arrive at the International Treaty on Plant Genetic Resources which will become operational on 29 Jun 04. This treaty recognizes, for the first time at the international level, farmers' rights and the rights of countries originating genetic resources. Further, under FAO's umbrella, genetic resources for food and agriculture are conserved at the international level by the international agricultural research centres of the CGIAR. FAO also assists developing countries to conserve their national genetic resources in situ and in vitro.

In the above context, I would also mention that, in the Declaration adopted at the World Food Summit: five years later (WFS: fyl) in June 2002, the Heads of State and Government reaffirmed "the right of everyone to have access to safe and nutritious food". Under the initiative of the FAO Council, an Intergovernmental Working Group has been established to develop a set of voluntary guidelines to support effective policies and measures for the right to adequate food.

4. Regarding the fight against hunger, the 1996 World Food Summit committed FAO Members to reducing by half the number of hungry persons in the world by 2015. In speeches, interviews, and press conferences, I have always reflected the discussions of the WFS: fyl, by indicating that the lack of political will and of mobilization of financial resources are the main obstacle to meeting this goal. Implementations of concrete projects in poor communities in rural and peri-urban areas are the priority for ensuring food production, employment and income, and thus achieving sustainable food security.

These projects should emphasize:

- small water harvesting, irrigation and drainage works (wells, canals, impoundments, treadle pumps, etc.). The other FAO annual report, The State of Food Insecurity 2003, indicated that 80% of food crises are related in some way to water, especially to drought. Yet Africa, for example, only uses 1.6% of its available water resources for irrigation.
- the use of improved seeds and seedlings, particularly those issued from the Green Revolution and conventional plant breeding and tissue culture; the combination of organic and chemical fertilizer in soils that are no longer placed under fallow and are now depleted due to population pressure and clearly deficient in plant-available phosphorus; the integrated biological control of pests, insects and plant diseases without making excessive use of pesticides and complying with the PIC Agreement negotiated under the auspices of UNEP and FAO; and simple post-harvest technologies;
- diversification of village and household farming systems, with the introduction of short-cycle animal production (poultry, sheep, goats, pigs) and the provision of feed, vaccine and shelter; artisanal fisheries and small-scale aquaculture;
- the construction of rural roads, local markets and storage and packing facilities, meeting quality and sanitary standards;
- the negotiation of more equitable terms for international agricultural trade.

I have always maintained that GMOs are not needed to achieve the World Food Summit objective: improved seeds and plant material generated by international agricultural research centres, particularly within the framework of the Green Revolution and by national research systems, including hybrids and varieties from inter-specific breeding are barely used by the smallholders of the Third World. In the meantime, I have always drawn attention to the need to feed a world population that will increase from a current 6 billion people to 9 billion in 2050, requiring a 60% increase in food production, while expanding the arable land area is becoming increasingly unfeasible because urbanization, industrial expansion and transport infrastructure is encroaching upon rural land and deforestation and the cultivation of fragile ecosystems are causing soil degradation. Such a situation will require intensified cultivation, higher yields and greater productivity.

With this in mind, we will have to use the scientific tools of molecular biology, in particular the identification of molecular markers, genetic mapping and gene transfer for more effective plant enhancement, going beyond the phenotype-based methods. Decisions on the rules and utilization of these techniques must however be taken at the international level by competent bodies such as the Codex Alimentarius. The developing countries should not only take part in the decision-making, but should also develop their scientific capacity and master the necessary expertise and techniques so that they can understand the implications and make independent choices in order to reach an international consensus on issues that concern all of humanity. FAO provides support to the countries of the Third World to this end and will continue to do so. Finally, in contrast to the Green Revolution which was generated by international public research and provided national research systems with improved genetic material, at no expense, biotechnology research is essentially driven by the world's top ten transnational corporations, which are spending annually US\$3 billion.

By comparison, the CGIAR system, the largest international public sector supplier of agricultural technologies for developing countries has a total annual budget of less than US\$300 million. The private sector protects its results with patents in order to earn from its investment and it concentrates on products that have no relevance to food in developing countries. FAO, in accordance with its mandate, will continue to provide a framework for ensuring a dialogue on these issues at the international level. Such a dialogue should be based on sound scientific principles allowing the analysis of socio-economic implications as well as sanitary and environmental issues.

For the sake of transparency, I would be grateful if you would post this reply on your internet site.
Yours sincerely, Jacques Diouf

(Ed: We usually shorten long articles, but this letter gives broad clarification for developing countries on misinformation about agricultural biotechnology)

Backlash curbs GM investment

Simon Collins in San Francisco. 11 Jun 04. BIC 19 Jun 04

<http://www.nzherald.co.nz/storydisplay.cfm?storyID=3571917&thesection=news&thesubsection=general> From

Investment in GM food is drying up in the world's biggest GM market, the US, because consumers in the rest of the world are not willing to buy its products. Speakers at the Bio 2004 conference, which ended in San Francisco yesterday, forecast continued fast growth in investment in GM medicines, including those made in modified plants and animals. But Roger Wyse of San Francisco-based Burrill and Company, the biggest investment firm focused on life sciences, said the consumer backlash against GMOs had forced a lull in projects aimed at modifying food. "We are probably looking at 3, 4 or 5 years before the GMO issue subsides sufficiently that we will feel comfortable investing in it," he said.

New Zealand-born Dr John Bedbrook, the first person to clone a plant gene in the early 1980s and now head of GM crop developer Verdia, said the EU had a very fragmented regulatory framework for the technology. "That has stymied commercialisation in Europe. It has confused people. "As a New Zealander I can see that they have exported that confusion to the colonies, and that is a really bad thing." Dr Bedbrook, whose company was sold last week to the chemical giant DuPont for US\$64 million (\$102.4 million), urged his colleagues at the conference to be more active in moulding public opinion to see GM food as just as safe as GM medicines. He said the key was a transparent regulatory system which the public could trust to assess safety issues.

California consultant Ken Moonie, who has joined Dr Bedbrook on the Government's World Class New Zealanders programme to advise New Zealand (NZ) businesses, said the GM backlash was "the biggest challenge we are facing". "There are a lot of exciting things going on in NZ, where lower-cost technology is happening," he told the Bio delegates. "But people in this room and people interested in technology need to do something about the anti-GM sentiment."

Biotechnology in its modern sense means anything which uses knowledge of living things at the level of individual molecules or genes, and includes new drugs and plant breeding which use this knowledge without actually changing an organism's genes. But a big chunk of the research and new products discussed at the Bio conference does involve inserting, knocking out or shifting genes in bacteria to make new medicines, or in plants and animals to add new nutritional qualities into food.

Speakers outlined several new projects to genetically modify goats, hens, maize, tobacco and safflower to make them into biological factories producing medicines in their milk, eggs, plants and seeds. The Massachusetts company making an anti-blood clotting medicine by putting a human protein into goats milk, GTC Biotherapeutics, became the first applicant to seek approval for a transgenic product from the European Medicines Evaluation Agency. GTC vice-president Greg Liposky said the protein had already been tested on 190 people in the US and clinical trials would start in Europe as soon as they were approved.

FAO e-conference on biotechnology and food processing

FAO. 14 Jun 04. http://www.agbios.com/static/news/NEWSID_5602.php COPYRIGHT © FAO

Biotechnology includes a wide range of diverse technologies and they may be applied in each of the different food and agriculture sectors. It includes technologies such as gene modification (manipulation) and transfer; the use of molecular markers; development of recombinant vaccines and DNA-based methods of disease characterisation/diagnosis; in-vitro vegetative propagation of plants; embryo transfer and other reproductive technologies in animals or triploidisation in fish.

It also includes a range of technologies used to process the raw food materials produced by the crop, fishery and livestock sectors. This is the area that will be considered in this conference, the 11th one to be hosted by the FAO Biotechnology Forum since it was launched in March 2000. It is an area that receives relatively little attention from the media, but which is very important for food security in many developing countries.

For more information and to participate in this electronic conference, visit:

<http://www.fao.org/biotech/C11doc.htm>