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News

GLOBAL

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ACCEPTANCE OF GM FOOD: AN EXPERIMENT IN SIX COUNTRIES

A team of scientists from the University of Otago, New Zealand, carried out a series of experiments designed to determine how consumers in six countries (New Zealand, Sweden, Belgium, France, Germany and the UK) might react toward GM food products that offer clearly stated consumer benefits if introduced into their markets.

The experiment consisted of real roadside fruit stalls based on a choice modeling experimental design. Conventional fruit labeled as "organic", "spray-free genetically modified", or "conventional", were sold at varying price levels. The results obtained from the price scenario considered most likely, where organic produce is sold at a premium while the spray free-GM option is cheaper due to reduced production costs, revealed that a significant percentage of consumers

in European countries appear willing to choose GM food provided there is a price advantage coupled with a consumer benefit.

The full article can be accessed at <http://www.nature.com/nbt/journal/v25/n5/index.html#opcom>

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COMPLIANCE COSTS FOR REGULATORY APPROVAL OF NEW BIOTECH CROPS

The regulatory approval process for new biotech crops is slow and expensive, and presents important barriers to the development and commercialization of new GM varieties. A team of scientists from the University of Missouri-Columbia, and the University of California, have characterized the structure of such compliance costs and identified key dimensions of their variability.

The main conclusions of the study are:

1. there is a wide variance in the total compliance costs incurred by biotech developers, which is also attributable to the developers' expectations of the appropriate number and types of field trials, analytical tests and assessment studies that are likely to satisfy the various national regulators
2. four cost categories dominate: production of tissues; compositional assessment; protein production and characterization; and molecular characterization. These represent 60% of all variable costs
3. overhead costs for facilities and management represent between 10% and 20% of the total compliance costs

Not included in the study are indirect compliance costs, such as pre-regulatory safety assessments; indirect private compliance costs from unnecessary and unexpected regulatory delays; increased expenditures; foregone profits from delays in commercialization; and costs for channeling and segregating biotech crops away from certain markets in cases of partial approvals. Such indirect regulatory costs are likely significant but are more difficult to estimate than direct ones.

The article can be accessed at: <http://www.nature.com/nbt/journal/v25/n5/index.html>

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UN REPORT ON BIOENERGY CAUTIONS ON BIOFUELS ADOPTION

A recent report by the United Nations-Energy (a "cross agency body" of the United Nations) presents a more cautious view on the benefits of biofuels production and utilization. The report, entitled "Sustainable Bioenergy: A Framework for Decision Makers", attempts to "point key social, economic and ecological sustainability issues" raised by small and large-scale development applications of bioenergy. While the production and use of biofuels can contribute to a cleaner global air environment, and to employment and income generation in the rural agricultural sector, the potential negative impacts on food security, and other environmental effects must not be ignored.

Among these potential negative impacts are: (1) diversion of land from food use (to biofuel crop use) could increase food prices (this is reportedly already happening for sugar and corn crops), (2) razing and loss of tropical forests that are cleared for biofuel plantations (the case of palm oil in Indonesia), (3) biodiversity loss, soil erosion and nutrient leaching as a consequence of large scale biofuel monocropping, (4) small-scale farmers may have difficulty competing with large scale biofuel plantations. Careful planning is necessary to address the potential negative impacts of biofuels and to offset them in order to derive the full benefits of bioenergy. The report also states that "biofuels are more effective when used for heat and power rather than in transport".

For more information visit <http://esa.un.org/un-energy/pdf/susdev.Biofuels.FAO.pdf>

To view other news on biofuels visit ISAAA's biofuels newsletter at <http://www.isaaa.org/kc/cropbiotechupdate/biofuels/news/2007/05/11.html>

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ORGANIC AGRICULTURE AND FOOD SECURITY

In a paper "Organic Agriculture and Food Security" presented by the Food and Agriculture Organization (FAO) at a recent conference on organic agriculture and food security, FAO recognizes the economic importance of organic agriculture and its potential to contribute to global food supply. The paper identifies the strengths and weaknesses of organic agriculture with regards to its contribution to food security, analyzes attributes of organic supply chains against the Right to Food framework, and proposes policy and research actions for improving the performance of organic agriculture at the national, international and institutional levels.

"The strongest feature of organic agriculture is its reliance on fossil-fuel independent and locally-available production assets; working with natural processes increases cost-effectiveness and resilience of agro-ecosystems to climatic stress," the paper says.

Read the press release at <http://www.fao.org/newsroom/en/news/2007/1000550/index.html>.

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GM PATENT REJECTED AFTER 13 YEARS FOR LACK OF "NOVELTY"

At a recent hearing, the European Patent Office (EPO) revoked a patent owned by agricultural giant Monsanto for the genetic modification of soybeans, saying the technique lacked "novelty". The application for the soybean patent was first submitted in 1988 by US biotech company Agracetus under the title "Particle-mediated transformation of soybean plants and lines". Monsanto acquired Agracetus in 1996, thus becoming the owner of the patent. The patent was due to expire in 2008. According to a spokesperson for Monsanto, the decision is not expected to have an impact on Monsanto's business.

Read the news article at <http://www.nature.com/news/2007/070430/full/070430-14.html>.

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GENETIC DIVERSITY WILL HELP SOLVE FUTURE GLOBAL CHALLENGES

At the BIO 2007 International Convention, DuPont urged biotechnology leaders to ensure the availability of the genetic material needed to develop crops that will meet the unforeseen challenges of future generations. The company was one of the first to pledge \$1 million to the Global Crop Diversity Trust, an international fund charged with securing long-term funding for the support of genebanks and crop genetic diversity collections throughout the world.

"As researchers in the public and private sector gain a better understanding of the genetic language of crops, we will be better suited to use the latest biotech tools, such as genomics and molecular markers, to develop solutions to the challenges of future generations," said Stephen Smith, a DuPont scientist and leading expert on plant genetic

diversity. "If plant genetic resources are not properly conserved, it will be like learning how to read and then going to the library to find no books on the shelves."

Readers can access the news release at <http://www.pioneer.com/web/site/portal/menuitem.82bf93a691ed7c66b771c663d10093a0/>.

AFRICA

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GM CHICORY BRINGS HOPE TO AFRICAN MALARIA PATIENTS

Approximately, 40% of the world's population, mostly living in the world's poorest countries, is at risk of malaria. Every year, more than 500 million people become severely ill with malaria. Most cases and deaths are in sub-Saharan Africa. Artemisinin is a basic raw material used in ACTs (Artemisinin-based Combination Therapies). The compound is isolated from the shrub *Artemisia annua*, long used in traditional Chinese medicine. However, artemisinin is an expensive plant extract, so for the drug to benefit patients in poorer countries the price of production must drop sharply.

Dafra Pharma, a Belgian pharmaceutical company, has commissioned Plant Research International (PRI) to begin new research into optimizing the production method of artemisinin via genetically modified chicory plants. The aim of the research is to realize inexpensive, large-scale production of artemisinin under controllable conditions.

Read more at: <http://sev.prnewswire.com/biotechnology/20070508/3406093en-1.html>

AMERICAS

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ARS, ON LETTUCE AND FRUITFLIES

Agricultural Research Service (ARS) scientists at Salinas, California, have teamed with University of California-Davis colleagues to produce the first-ever parent iceberg lettuces resistant to verticillium wilt. The fungus pathogen, *Verticillium dahliae*, infects iceberg lettuces, causing the vulnerable plants to discolor, then to eventually wilt and die. Breeding lettuces with natural resistance remains the most environmentally friendly, economical and sustainable option for combating the fungus. Seeds of the three new parent lettuces are now available to researchers and plant breeders.

In a related news, research by the ARS U.S. Pacific Basin Agricultural Research Center (PBARC) in Hilo, Hawaii, and the ARS Kika de la Garza Subtropical Agricultural Research Center in Weslaco, Texas, have resulted in the development of improved techniques to minimize fruit fly infestation, reducing thereby pesticide use by as much as 8,000-fold by the state of California. These techniques include improved ways of producing sterile male fruit flies for release to short-circuit the breeding cycle, new biocontrols such as augmentative releases of parasitic wasps, more effective and more species-specific lures and baits, and better ways to manage crops.

The news releases are available at <http://www.ars.usda.gov/News/docs.htm?docid=1261> and <http://www.ars.usda.gov/is/pr/2007/070509.htm>.

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GOURMET CHOCOLATES TO BOOST FARMERS' INCOMES AND PRESERVE BIODIVERSITY

Gourmets will enjoy new delights of complex-flavored chocolates based on single varieties of cacao. Bioversity International will be helping farmers in Nicaragua improve the quality of cacao being planted, and have the cocoa beans exported to Europe and North America. Many farmers have a few cacao trees, and most of these are modern disease-resistant hybrids, but of low quality and low earning potential. Older trees, called criollo, produce much better cocoa, but these are vanishing rapidly as a result of neglect. The new project will focus on improving these older and diverse trees to yield more high-quality cocoa beans.

Read the news release at <http://www.cgiar.org/newsroom/releases/news.asp?idnews=568>.

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ROUNDUP READY ALFALFA STILL BANNED

The US District Court for the Northern District California banned the continual planting of the Roundup Ready Alfalfa unless the US Department of Agriculture (USDA) has made an environmental impact statement. Although the said variety was previously accepted to have no harm to human and livestock, the court said that the USDA did not sufficiently follow the requirements stated by the National Environmental Policy Act. Meanwhile, Monsanto, the maker of Roundup Ready Alfalfa, argued that the farmers have the right to access this kind of technology. They presented studies and real-life examples to show that the Roundup Ready Alfalfa is safe and can co-exist with organic and conventional alfalfa.

To read the full article, visit: <http://monsanto.mediaroom.com/index.php?s=43&item=486>

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SPARTAN CORN FOR CARS

The leaves and stalks of a new corn variety developed by Michigan State University (MSU) researchers are just as important as its kernels. The corn variety contains enzymes that can easily break down the cellulose and hemicellulose into simple sugars in their leaves for the production of ethanol. In this way, the production of ethanol will be more cost-effective and efficient. Mariam Sticklen, an MSU professor of crop and soil sciences, said that not only the farmers can sell the corn grains but also the leaves and stalks for ethanol production. "What is now a waste product will become an economically viable commodity."

Read the news release at <http://newsroom.msu.edu/site/indexer/3080/content.htm>

ASIA AND THE PACIFIC

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INDIA: SUPREME COURT LIFTS TEMPORARY BAN ON FIELD TRIALS ON GM CROPS

The Supreme Court of India has lifted an eight-month temporary ban on field trials of genetically-modified food crops on 8th May 2007. With this judgment, farmers will have more choices of Bt cotton varieties suited for local agro-

climatic conditions. The ruling will also allow resuming the approval of filed trials for various crops such as brinjal, mustard, rice, maize, potato, tomato, okra and groundnut.

Referring to the Supreme Court judgment on the field trials of GM crops, the Union Minister of State for Environment and Forests, Mr Namo Narayan Meena, said the entire research activities of the country which have been at a standstill will get momentum, and that the Genetic Engineering Approval Committee (GEAC) will be able to work speedily. Mr Meena assured the members of the Consultative Committee of the Ministry of Environment and Forests (MOEF) that along with treating agricultural biotechnology as a priority area for investments, priority will be given to proper risk assessment and to appropriate measures to mitigate its adverse impacts.

For more information visit <http://pib.nic.in/release/release.asp?relid=27636> or contact: Bhagirath Choudhary at b.choudhary@isaaa.org

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HYBRID PIGEONPEA PRODUCES "QUANTUM LEAP IN YIELD"

Scientists at the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) and the Indian Council of Agricultural Research (ICAR) announced recently that the new hybrid of grain legume pigeonpea, *Cajanus cajan*, known as ICPH 2671, produces nearly 50 percent more grain than the popular Indian cultivar Maruti. Agricultural scientist M.S. Swaminathan predicts that the new pigeonpea hybrids, with their "quantum leap in yield," could open the way for a revolution in the production of this important pulse, similar to the transformation of wheat and rice production made possible several decades ago by novel semi-dwarf varieties.

ICRISAT is working closely with a consortium of private- and public-sector seed companies in India to ensure that ample supplies of hybrid seeds can be made widely available within the next couple of years.

Read the news article at <http://www.cgiar.org/monthlystory/may2007.html>.

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NEW KNOWLEDGE LEADS TO IMPROVED RICE QUALITY

The International Network Quality Rice is a new initiative by the International Rice Research Institute (IRRI), which aims to help rice breeders around the world develop varieties with improved quality traits such as better taste, aroma, and cooking characteristics as well as higher levels of nutrition. This will lead to a boost in the income of poor farmers and to more nutritious and better tasting food. The quality rice network met for the first time last month during a workshop held at IRRI.

"Many of the issues we discussed may not have even been considered a few years ago, but, with the recent advances in molecular biology and exciting new areas such as metabolomics (the whole-genome assessment of metabolites), we can do things now that we could only dream about before", said Melissa Fitzgerald, the convener and head of IRRI's Grain Quality, Nutrition, and Postharvest Center.

The news article can be read at http://www.eurekalert.org/pub_releases/2007-05/irri-nki050707.php.

INDONESIA DEVELOPS NEW RICE VARIETIES TO FIGHT BACTERIAL BLIGHT

Bacterial blight (BB) disease of rice is caused by *Xanthomonas oryzae*. It is one of the most important diseases of rice in most of the rice growing countries. The Indonesian Agricultural Biotechnology and Genetic Resources Research Institute in collaboration with the Indonesian Institute for Rice Research, the West Java Assessment Institute for Agricultural Technology and the Agricultural Office of Cianjur have developed by conventional breeding methods new rice varieties with improved tolerance to BB, the Angke and Code varieties.

"With the using of superior varieties as Angke and Code, Indonesia will have a big opportunity to increase the national rice production and also meet the government target for rice self sufficiency," said Dr. Sutrisno, Head of Indonesian Agricultural Biotechnology and Genetic Resources Research Institute.

Visit <http://www.litbang.deptan.go.id/berita/one/463/> or contact Elfa Hermawan at l4hermawan@yahoo.com for more information.

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VIETNAM SETS TO DEVELOP GM CROPS

Viet Nam has stated that the country will be producing genetically modified (GM) crops by 2020 in a draft of a biotechnology development plan authored by the Ministry of Industry. In addition to GM crops, enzymes, amino acids, new generation vaccines, antibiotics and other bio products will be produced by the country by 2020. Two hi-biotechnology centers will be built in Ha Noi and Ho Chi Minh City, and a number of international standard research and development centers will be set up nationwide to enable the plan's success.

For further information, contact Hien Le of Biotech Vietnam at hientttm@yahoo.com.

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WORKSHOP ON LOW COST GENE TECHNOLOGIES HELD IN INDIA

High cost of the molecular technologies has been a concern particularly for developing countries, restricting the application of these powerful tools by only a few of their NARS. The Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), in collaboration with the International Rice Research Institute (IRRI), Generation Challenge Program, the International Maize and Wheat Improvement Center (CIMMYT), and the Barwale Foundation held a workshop on "Low-cost gene-based technologies for MAS application in rice and maize". The event, held in Jalna, Maharashtra, India in April aimed to update the scientists from NARS of the developing countries on new low-cost technologies for molecular aided selection.

For more information contact j.karihaloo@cgiar.org.

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GRAINS BECOME BETTER AND HEALTHIER

Ongoing research into new high-fiber barleys, high-amylose wheat varieties and oilseeds which are rich in omega-3 fatty acids should soon lead to the production of cereals and a host of other foods which will help improve bowel and heart health, according to Dr. Morell of the Commonwealth Scientific and Industrial Research Organization (CSIRO).

CSIRO's research into high amylose wheat (HAW) is part of an international collaboration with Australia's Grains Research and Development Corporation and the French farmer-owned company, Limagrain Céréales Ingrédients. CSIRO's RNAi gene silencing techniques enabled researchers to define the genetic changes required to generate HAW and will help the team develop both conventionally-bred and GM wheat varieties. The joint venture recently produced an experimental wheat variety with an amylose content of 70 per cent. The researchers are now working on a new barley cultivar called BARLEYmax™ – a hull-less variety with 25 per cent of total dietary fiber, plus resistant starch, and suitable for food formulation.

The news article is available at <http://www.csiro.au/news/GrainBasedFoods.html>.

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STUDY EXAMINES POTENTIAL IMPACT OF GM CANOLA ON ORGANIC SECTORS IN AUSTRALIA

The commercialization of GM canola in Australia is likely to have only negligible direct impacts on the organic canola, livestock and honey industries according to a new report by the Australian Bureau of Agricultural and Resource Economics (ABARE). The report, entitled "Potential impacts from the introduction of GM canola on organic farming in Australia", investigates the potential economic impacts of the commercialization of GM canola in Australia on domestic organic agriculture, and looks into the treatment of GMOs in organic certification standards in Australia and in Australia's main organic trade partners.

Phillip Glyde, Executive Director of ABARE, cautioned that the introduction of GM varieties of other crops that are more extensively grown in Australia as certified organic may have a different impact.

The news release is available at http://www.abareconomics.com/corporate/media/2007_releases/10may_07.html

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AUSTRALIANS NEED TO EMBRACE GM FOODS

For them to survive the era of climate change, Australians must accept genetically modified (GM) food, according to Mark Tester, Professor from the Australian Center for Plant Functional Genomics at the University of Adelaide. Genetic modification can improve crop plants so that they can battle against the changing environment. It makes them tougher for them to survive droughts and floods.

Tester believes that technological advancements can bring about a lot of benefits not only to the society but also to the environment. "Genetically modified food is about adapting the plant to the environment rather than adopting the environment to the plant," he said.

The article is available at <http://www.thewest.com.au/aapstory.aspx?StoryName=379895>.

EUROPE

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CIRAD AND INRA LAUNCH THE FRENCH INTERNATIONAL AGRICULTURAL INITIATIVE (IFRAI)

The French Agricultural Research Centre (CIRAD) and the French National Institute for Agricultural Research (INRA) have established the French International Agricultural Research Initiative (IFRAI). The main aim of the initiative is to promote France's contribution to sustainable development on an international scale, particularly as regards to the Consultative Group on International Agricultural Research (CGIAR).

The GIP has been set up for a renewable five-year period. It comprises staff from CIRAD and INRA, and has an annual budget of € 500 000. It will be headed by Bernard Hubert, formerly Scientific Director for "Society, Economics and Decision-making" at INRA. The group will be chaired alternately by CIRAD and INRA.

For more information visit: <http://www.cirad.fr/en/presse/communiqu.php?id=270>

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SIROCCO – SILENCING GENES FOR HEALTH AND AGRICULTURE

RNA silencing is a natural mechanism of gene regulation in cells. Small RNA molecules are involved in the degradation of their target genes, regulating in this way their expression. Bringing together 17 world-class laboratories and companies from nine European countries, the SIROCCO consortium hopes to make significant inroads in the study of this revolutionary technique. The goal of the consortium is to exploit RNA silencing mechanisms in order to improve human and plant health. The outputs of SIROCCO will include databases of silencing RNAs' sequence and function in several organisms, and new technologies for detection and manipulation of these molecules.

"Only a few years ago it was unknown, but now RNA silencing is one of the most powerful tools available to researchers. We can use it to understand the function of genes and the mechanisms of cellular regulation," said Professor David Baulcombe of the Sainsbury Laboratory at the John Innes Centre, the leading partner in SIROCCO.

More information available in <http://www.sirocco-project.eu/> and http://cordis.europa.eu/fetch?CALLER=EN_NEWS&ACTION=D&SESSION=&RCN=27533.

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FARMERS IN UK, GERMANY WILLING TO GROW GM CROPS

New surveys suggest that more farmers in the United Kingdom and Germany are willing to cultivate genetically modified (GM) crops. In the UK, the British Grassland Society polled its members on their attitude towards GM crops. Only 16 percent of responding farmers expressed strict opposition to GMOs, while 47 percent generally favor GM crops. Three-quarters of the interviewees stated that they would grow GM plants if consumers were willing to buy them.

In another survey, researchers of the University of Göttingen interviewed farmers in northwest Germany. A third of the farmers welcomed GM crops, while 29 percent rejected them. The majority, however, remained undecided.

The news article is available at <http://www.gmo-compass.org/eng/news/messages/200705.docu.html#111>.

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UK GOVERNMENT ADVISED TO LOOK AT THE BRIGHTER SIDE OF GM CROPS

The British government was advised to look more on the positive effects of agricultural advances than its negative impacts to the society. The advisory committee said that by testing the impact of new farming techniques and novel crops, such as GM varieties, it should make a balance between the harmful environmental effects and the benefits it could bring to the society. Chris Pollock, the committee chairman, said that the future of British agriculture will be in great danger if the farmers are not given the opportunity to adopt new technologies that were proven to have a lot of benefits. "We have to be open to new technologies," Pollock added.

Read the news article at <http://www.guardian.co.uk/science/story/0,,2072180,00.html>.

Research

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IDENTIFICATION OF TRANSGENIC TOMATOES USING NON-DESTRUCTIVE TECHNIQUES

Results of a recent study showed that tomatoes can be classified either as transgenic or non-transgenic by using visible/near-infrared (Vis/NIR) spectroscopy and chemometrics techniques. These non-destructive methods may have potential use in commercial and regulatory applications. The detection methods may likewise avoid the time-consuming, costly, and laborious chemical and sensory analyses.

Researchers in China's Zhejiang University, have demonstrated the utility of Vis/NIR spectroscopy by correctly identifying all of the transgenic tomatoes in a sample lot with conventional tomatoes. The transgenic tomato variety has the antisense ethylene receptor gene *LeETR1*, a gene that delays ripening.

The paper published by the Journal of Food Engineering, is available for subscribers at <http://dx.doi.org/10.1016/j.jfoodeng.2007.02.062>.

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MANNITOL EXPRESSING EGGPLANTS MORE RESISTANT TO FUNGAL WILTS

Previous research has demonstrated that mannitol, a type of sugar alcohol, plays an important role in alleviating abiotic stress in plants. Results of a recent study in the University of Delhi in India have also shown that the compound may also help plants deal with biotic stresses.

Researchers V. Prabhavathi, M.V. Rajam compared one-month-old seedlings of wild-type and T1 transgenic eggplants to test for resistance against fungal wilts. The researchers observed that transgenic eggplants expressing the *E. coli* mannitol-1-phosphate dehydrogenase (*mtID*) gene has an increased resistance against the wilt diseases caused by *Fusarium oxysporum*, *Verticillium dahliae* and *Rhizoctonia solani*.

Prabhavathi and Rajam attribute the resistance in the transgenic eggplants to the higher mannitol accumulation. Mannitol levels on the wild type eggplants were not detected by the researchers. The results, together with previous data, suggest that *mtID* gene can be used for engineering crop plants for both biotic and abiotic stress tolerance.

The paper has been accepted for publication in the journal Plant Science and can be accessed by subscribers at <http://dx.doi.org/doi:10.1016/j.plantsci.2007.04.004>.

SULFATE PHYTOREMEDIATION THROUGH TRANSGENIC WATER SPINACH

The accumulation of sulfate in waste water generated from lignite mines is an important environmental concern. Plants naturally utilize sulfate through a mechanism known as sulfate assimilation. With the aim of increasing sulfate uptake in water spinach (*Ipomoea aquatica*), a team of scientists from Chulalongkorn University, Thailand, developed two transgenic lines of *I. aquatica* harboring a serine acetyltransferase (*SAT1*) gene from Arabidopsis, and a cysteine synthase (*rct1*) gene from rice.

The authors report that sulphate absorption in the transgenic lines was 4.0 and 5.5 times higher than in the conventional controls. The result suggests that the final step of cysteine biosynthesis is the key step of sulfate assimilation. The *Ipomoea aquatica* transgenic lines have potential for sulfate phytoremediation in mine drainage waters.

More information available at:

http://www.scisoc.or.th/stt/31/sec_h/paper/stt31_H0024.pdf

Announcements

MOLECULAR MARKERS TECHNIQUES AND FINGERPRINTING COURSE

Within the framework of the Network of Centres of Excellence, UNCTAD will select and sponsor 20 scientists and researchers from African countries to attend the training course at AGERI, in Giza, Egypt, from 1 to 12 July 2007. The Molecular Marker Techniques and Fingerprinting training course will focus on theoretical as well as practical experience in the advanced technologies of molecular markers. Deadline for application is 20 May.

More information and application forms to participate are available on

<http://www.unctad.org/Templates/Meeting.asp?intItemID=2068&lang=1&m=13557&year=2007&month=7>

APSA TRAINING COURSE IN HYBRID RICE PRODUCTION IN CHINA

APSA, the Asian Pacific Seed Association, in collaboration with the International Rice Research Institute, is organizing a month-long training program on hybrid rice production with the aim of providing technical expertise to rice research scientists, academicians, and those others involved in this field. The training will be held from 1 June to 30 June 2007 at Jiangxi Academy of Agricultural Science in Nanchang City of Jiangxi Province, China.

More information available at <http://www.apsaseed.org/activities/HybridRice07.html>

Document Reminders

NEW BY CIRAD: ALL YOU NEED TO KNOW ABOUT COTTON

Cotton is a driving force in development in West and Central Africa. However, yields are stagnating in those countries, and their cotton production chains are having to cope with market liberalization, the agricultural aid policies of some major producing countries and falling world prices. In 2006, CIRAD produced a report on cotton for the Paris International Agricultural Fair. The English version of the report has been supplemented by seventeen thematic sheets on CIRADs research projects, which are now available in English.

Access the documents at <http://www.cirad.fr/en/actualite/communiqued.php?id=699>

FRENCH AND PORTUGUESE VERSIONS OF SEED AID FOR SEED SECURITY: PRACTICE BRIEFS

The ten Practice Briefs, that offer advice on how to sustain and strengthen seed systems during disaster response and recovery periods, are now also available in French and Portuguese. The Briefs are published by the International Center for Tropical Agriculture (CIAT), and can be accessed at: <http://www.ciat.cgiar.org/news/news.htm>

NAL PUBLISHES SPANISH VERSION OF AGRICULTURAL THESAURUS AND GLOSSARY

The United States National Agricultural Library (NAL) has published online the Spanish language versions of its NAL Agricultural Thesaurus (NALT) and Glossary of Agricultural Terms. The first Spanish language edition of the NALT includes definitions for more than 2,400 of the concepts, in both English and Spanish, which are published in a separate interface as the Glossary of Agricultural Terms.

For more information, visit <http://www.ars.usda.gov/News/docs.htm?docid=1261>.

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