



The International Centre for Underutilised Crops

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# ICUC-News #76

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Dear colleagues,  
Thank you to those of you who took the time to respond to the questions I posed in the last issue regarding this newsletter. The responses have been summarised under ICUC-related information, below. For those of you who couldn't find the time - no need to feel guilty – as a larger questionnaire is being developed especially for you! As the ICUC and GFU prepare the final stages of their merger, plans are being made for a single website, news service and library, and expanded databases. You will be asked one last time for your advice and views in helping to make the web-based resources of this new entity best suit your needs. Until that time, another issue, poor in jobs and workshops but rich in news – and hardly a mention of climate change, for a change. May I also draw your attention particularly to 3.1., and the call for articles including those on 'diverse crops' for the next issues of LEISA magazine.

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With best wishes,  
Nick

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**1. Funding & Job opportunities**

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**1.1. Sustainable Vision Grants**

Grants range from \$10,000 to \$50,000. USA-based universities and colleges are eligible to apply. Through our Sustainable Vision grants program, the NCIIA funds transformational education programs

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where breakthrough technologies are created and commercialized for the benefit of people living in poverty in the US and abroad. Sustainable Vision program has a domestic or global outlook. In the past two years the NCIIA has funded U.S. programs with partners in Afghanistan, Burma, Cameroon, Ecuador, Honduras, Mali, Pakistan and Vietnam, as well as local partners.

Successful Sustainable Vision grant proposals address basic human needs such as health, food security, clean water, and affordable energy. To receive a grant, inventions and technologies must be commercially viable and able to be increased in scale; the program may begin by addressing needs at the household or village level, but should have the potential for national or even global impact. Grantees collaborate with non-profit, for-profit, educational or government partners to bring socially beneficial products to the poor in an economically sustainable way. These experiences should further inform and expand curricula and the in-the-field opportunities offered to students. Projects must be sustainable beyond the length of the grant and ideally should provide a structure for ongoing collaboration and education.

See [http://www.nciia.org/g\\_sustainable.html](http://www.nciia.org/g_sustainable.html) to read our guidelines and review profiles of Sustainable Vision programs that we have funded. If you have any questions, contact [info@nciia.org](mailto:info@nciia.org). The 2008 deadline is 5 pm EST (USA), Friday, October 17, 2008.

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**2. Workshops & Training Courses**  
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**2.1. New 'Events' section on the ICUC website**

For more information on events where ICUC have a special involvement, e.g. as a sponsor or co-organiser, please see the new link on ICUC website, <http://www.icuc-iwmi.org/Events/index.htm>. These will have been advertised through ICUC News also.

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**3. Publications & Information**  
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**3.1. Respect Through Farming - New issue of the LEISA Magazine (Vol. 24, No.3)**

For people sidelined by society, small scale farming can provide opportunities in life. In this issue, we present experiences which show how people facing social stigma, or living with physical disability can grow crops or rear livestock and gain "Respect through farming". The magazine features many practical experiences from all over the world, as well as addressing possible long-term solutions that can remove the causes of exclusion. Read in the latest LEISA Magazine why and how agriculture can help marginalised people to play a meaningful role in their communities.

E-LEISA carries highlights from LEISA Magazine and keeps you in touch with the LEISA Network at [www.leisa.info](http://www.leisa.info). In the latest issue: Respect through farming • Subsidized fertilizer for Africa, two views • Summary of our latest debate on Effective Micro-organisms • Come and meet us at... • News from the regional editions • Jubilee: LEISA Magazine 25 • Call for articles: Diverse family farming.

For our next issue, "Diverse farming systems", we are seeking articles about initiatives that explicitly recognise the value of diverse landscapes, diverse ways of life, diverse crops and agricultural systems and which stand up against policies and developments that undermine an independent family farmers' way of life. Please send your stories, by 1 December 2008 to Karen Hampson [k.hampson@ileia.nl](mailto:k.hampson@ileia.nl).

E-LEISA is sent to you by ILEIA, an independent organisation supporting small-scale farmers in their search for sustainable alternatives to conventional agriculture. ILEIA is a member of the LEISA Network, a platform for the exchange of knowledge worldwide on small-scale sustainable farming. The network publishes seven magazines on sustainable small-scale farming: a global edition, LEISA Magazine, and six regional editions. Its readers – and contributors – are field workers, researchers, policy makers and farmers. All editions combined have close to 50,000 subscribers. For more information, visit [www.leisa.info](http://www.leisa.info).

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**3.2. Mongolia to develop high value farm products**

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The Asian Development Bank (ADB) and the Japan Special Fund are helping Mongolia develop high value agricultural products to support the rural economy and strengthen the agribusiness sector. ADB will provide a \$14.72 million grant from its Asian Development Fund, while the Japan Special Fund, through ADB, is extending associated technical assistance equivalent to \$2 million for the Mongolia Agriculture and Rural Development Project. Additional finance for the project will include \$1.41 million equivalent from the Government of Mongolia, \$11 million from participating commercial banks and \$20.37 million from agribusiness enterprises.

Agriculture is at the heart of the Mongolian economy, making up 40% of total employment and accounting for 20% of the gross domestic product in 2007. But the sector is blighted by poor quality raw materials, badly-organized supply chains, low levels of management and customer service, old equipment, and insufficient working capital. Agribusiness enterprises also struggle in the face of keen competition from the People's Republic of China. Mongolia has a range of industries that use agricultural raw materials – meat, dairy, leather, cashmere, camel hair processing and garments, wool carpets and blankets, felt products, and fruit and wild berry products.

“Agriculture and rural development are crucial to broadening and sustaining Mongolia’s growth and providing opportunities for the many poor who have not benefited from recent growth,” said Mandar Jayawant, Senior Country Economist with ADB’s Mongolia Resident Mission. The project will create improvements along the ‘value chain’ of agribusinesses, helping them add value to their products and to develop premium brands that command high prices in international niche markets. It will also fund investments in rural infrastructure and services that support the agribusiness sector.

“Consumers increasingly demonstrate a willingness to pay a premium for quality products that are authentically, ethically and ecologically produced,” said Mr. Jayawant. The project aims to create 800 new jobs and benefit an estimated 2,500 families. It also has a strong gender element as women play a major role in agribusiness. Incomes of participating agriculture producers are expected to increase by an average of 60% from 2008 to 2015. The financial intermediary loan formula being used in the project marks a change from past ADB rural assistance to Mongolia, which has been solely through government-funded programs. Under the project, loans will be made available from participating banks to private enterprises, which by building up their own businesses will provide economic, social and environmental benefits to the wider community. Around 15 businesses are expected to apply for the loans and ADB expects that at least 25 more will make similar investments within five years of the project’s estimated completion in June 2012.

<http://www.adb.org/Media/Articles/2008/12635-mongolian-agricultural-developments/>

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### **3.3. World's crops to be screened for climate traits**

An international foundation is funding a drive to screen thousands of crops for traits that will be useful in adapting food production to climate change. The Global Crop Diversity Trust is providing around US\$300,000 of funding this year for researchers in 21 agricultural institutions in 15 countries across the developing world. Around US\$200,000 will be spent next year with a continued commitment in the long term. Crops from banana to sweet potato will be screened to identify material that plant breeders can use to produce varieties adapted to conditions associated with climate change.

Crop diversity is the biological foundation of agriculture, says Cary Fowler, executive director of the trust. "Without it agriculture cannot adapt to anything: pests, disease, climate change, drought, energy constraints ... nothing. With crop diversity we can have an agricultural system that — if we're smart — is sustainable and productive, can feed people and fuel development."

Researchers will screen the crops by growing them in different stress conditions — such as high salinity or high temperature — and assessing how well they grow. Varieties with positive traits will be put into an open access database, says Fowler. Some will also be entered into a 'pre-breeding' programme. Integrating one or two genes from an old or wild variety into a modern variety is costly and difficult, says Fowler, and pre-breeding produces early-stage, new varieties with the desired traits, so that plant breeders can get a 'head start' on producing varieties for farmers' fields.

"Plant breeders often have to make quick progress so they're loathe to get involved in the kind of cutting edge research to put exotic traits in [a crop]. So the pre-breeding at least gets that first set of genes into some kind of form that is easier for a plant breeder." Funded projects include a scheme in Papua New

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Guinea to screen over 20 varieties of the root crop taro for drought and salinity resistance. Taro is particularly important to the poor island communities of the Pacific region, as it need not be harvested for a number of years, making for a sustainable source of food and an 'insurance policy' at times when the prices of other staple crops become too high.

A programme in Bangladesh will screen varieties of the grass pea, a hardy crop that is often the only crop left in times of environmental stress and grown by the poorest communities. Long-term consumption of grass pea can lead to paralysis, as the plant produces a neurotoxin — giving people a choice between starvation or paralysis. Researchers will search for varieties with low levels of this neurotoxin.

Katherine Nightingale, 22 September 2008

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### 3.4. Nigeria gets new crop research centre

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is to re-establish a centre in Nigeria. ICRISAT signed a memorandum of understanding with the Agricultural Research Council of Nigeria to further scientific collaboration and facilitate exchange of germplasm, breeding material, scientific information and techniques. The centre will also form a base for ICRISAT to initiate a regional research and training programme on priority crops — mainly sorghum and millet — and natural resource management in West and Central Africa.

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### 3.5. A tamarind grove as bio-heritage site

Nallur, a village in Devanahalli taluk in Bangalore Rural district which once hosted vast tamarind groves, is now left with a patriarch of a tree, estimated to be 900 years old, still bearing fruit. The grove is now a bio-heritage site and the Karnataka Forest Department has been taking care of it for the last few years. The tree was among thousands planted during Rajendra Chola's time at the beginning of the 12th century. Adjacent to the King Tamarind there is Chennakeshava temple built during the Chola period. The tree stands majestically by the side of the ruins on the road from Devanahalli to Sulibele, 40 km from Bangalore. 'Amaroy Thopu,' as it is mentioned in epigraphical records, has still more trees aged between 500 and 800 years on an area of 53.02 acres. The youngest one is about 80 years old.

"This could be a gene bank in addition to being a heritage site," says V. Bhaskar, Professor of Forestry at the National Afforestation and Eco-Development Board of the Ministry of Environment and Forests. "The longevity and the productive years of old trees belonging to the same family of trees is a matter to be studied by biotechnologists." Dr. Bhaskar added: "Some trees here have shown extraordinary growth. They have developed prop roots and root suckers that are uncharacteristic of tamarind trees. I reported this phenomenon in *My Forest* journal in June 2004. Even though the mother trunk was dead, a series of root suckers have arisen from the trunk roots, which were not only unusual but also unknown."

According to Dr. Bhaskar, prop roots are characteristic of banyan trees and are meant to support lateral extension. But in these tamarind trees prop roots have unusually arisen from within the hollow stems and struck the ground as if the trees were trying to support themselves. Says horticulture specialist Narayanaswamy: "Tamarind trees have a life cycle of not more than 400 to 500 years, but in this case the life cycle has exceeded 900 years." In one case even the trunk roots have got shoots and they have become fruit-bearing trees, he pointed out. They are not independent trees but have sprung up from the mother tree. One tree with the large trunk was struck by lightning 75 to 80 years ago and the trunk split into two. Over the years, villagers made a path between the two halves. Both halves have become independent trees and bear fruit.

M. Raghuram, The Hindu. Online edition of India's National Newspaper, Sunday, September 28, 2008  
<http://www.hindu.com/2008/09/28/stories/2008092855412000.htm>

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### 3.6. Rainfed Farming Systems

Phil Tow, Ian Cooper, Ian Partridge, Colin Birch (Eds.), Australia. Due for release at the end of 2008. While a good knowledge of the many separate aspects of farming is important, it is equally essential for all those involved in agriculture to understand the functioning of the farming system as a whole and how it can be best managed. It is timely to re-assess and review rain-fed farming systems around the world in order to improve the selection, design and operation of such systems for long term productivity, profitability and sustainability. The components of the system must operate together efficiently; yet many of the relationships and interactions are not clearly understood. Appreciation of these matters and how they are affected by external influences or inputs are important for decision making and for achieving desirable outcomes for the farm as a whole. This book describes and evaluates common rain-fed farming systems throughout the world and defines the principles and practices important to their effective functioning and management. This analysis is built on understanding the relationships between the system components and practices used and between the systems and their environment. It is done in the context of many challenges facing agriculture: climatic variability and longer term climatic change; degradation of most agricultural soils; spread of plant diseases, crop pests and weeds; increasing demand for food, fibre and environmental/ecological services, rapid innovation in technology in some countries; and the interaction of market and political forces at both local and global levels. Chapters featuring rainfed agricultural systems in Australia, Canada, China, Mexico, Middle East, North Africa, South Africa, South America, South Asia, and USA  
For more information please go to [www.springer.com](http://www.springer.com)

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### 3.7. The Transformation of Agri-Food Systems - Globalization, Supply Chains and Smallholder Farmers

Ellen B. McCullough, Prabhu L. Pingali and Kostas G. Stamoulis. September 2008  
The driving forces of income growth, demographic shifts, globalization and technical change have led to a reorganization of food systems from farm to plate. The characteristics of supply chains - particularly the role of supermarkets - linking farmers have changed, from consumption and retail to wholesale, processing, procurement and production. This has had a dramatic effect on smallholder farmers, particularly in developing countries. This book presents a comprehensive framework for assessing the impacts of changing agri-food systems on smallholder farmers, recognizing the importance of heterogeneity between developing countries as well as within them. The book includes a number of case studies from Asia, Africa, Latin America and Eastern Europe, which are used to illustrate differences in food systems' characteristics and trends. The country case studies explore impacts on the small farm sector across different countries, local contexts and farm types. For further information, and to order the book at a 20% discount, visit the book's webpage  
<http://www.earthscan.co.uk/?tabid=3931>

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### 3.8. The Future Control of Food. A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security

Geoff Tansey and Tasmin Rajotte (eds.)  
This book is the first wide-ranging guide to the key issues of intellectual property and ownership, genetics, biodiversity, and food security. Proceeding from an introduction and overview of the issues, comprehensive chapters cover negotiations and instruments in the World Trade Organization, Convention on Biological Diversity, UN Food and Agriculture Organization, World Intellectual Property Organization, the International Union for the Protection of New Varieties of Plants, and various other international bodies. The final part discusses civil society responses to relevant changes and developments in these issues, how they affect the direction of research and development, the nature of global negotiation processes and various alternative futures.

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## 4. ICUC-related information

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### 4.1 ICUC-News Subscriber Survey

The quick ten-question questionnaire took only seven minutes to complete on average (5-10 m), but they were received from only seven readers. Special thanks to Lalkika, Mary, Paul, Rupert and Srinivas for their detailed views, and this showed that nonetheless, there was much concensus regarding the future needs for ICUC News, which is summarised here.

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The information is useful, and it is all read if subscribers have enough time. The formatting could be improved, and colour pictures and more links, as a pdf newsletter appeared to be preferred, though it was acknowledged that editorial time may be a constraint. Bimonthly (as currently) or monthly were both noted as reasonable, though there was one suggestion that different topics (e.g. jobs, news, events, etc.) could be released as an email news service when enough information was available, which could then be summarised and combined into a quarterly pdf 'newsletter'. The one addition that many wanted was for the newsletter to act as a forum for contacting other members directly. A blog may be more appropriate? A species profile per issue was also suggested. No-one realised that issue No. 75 was late. All the information shall be useful as we move forward to a new news service.

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**5. ICUC network**  
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**In this section we introduce new and old subscribers to ICUC-News to encourage greater interaction and benefit from the great diversity of readers. If you haven't done so, please send a brief introduction of yourself and your interest in underutilised crops to [h.jaenicke@cgiar.org](mailto:h.jaenicke@cgiar.org). We will not publish your email or phone contacts and if anyone is interested to establish direct contact, please write an email to me.**

- Dr. Sudhersan Chellan. Research Scientist, Biotechnology Department, Kuwait Institute for Scientific Research. Interest in underutilised tree fruits, especially guava, amla, ber, wood apple, custard apple and sugar apple.

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Championing underutilised plant species for food, nutrition and sustainable development