

CGIAR Alliance Office

Newsletter - March 2006

Message from the Chairs of the CBC and Alliance Executive

Dear CGIAR Partners and Colleagues:

As we write this issue of the FHO e-News we are delighted to announce that, following an extensive international search, Anne-Marie Izac has been appointed as the Chief Alliance Officer of the Future Harvest Alliance. It is expected that she will take up the position by next June. She will be responsible for establishing and leading the new Alliance Office, to be hosted by the International Fund for Agricultural Development (IFAD) in Rome.



Anne-Marie, a French citizen, has studied in France, the USA and Australia, receiving her PhD at the University of Western Australia in 1982. She comes to the position after a long and distinguished career in international agricultural research. Since September 2005 she has been Special Advisor to the Director General of the *Centre de Coopération Internationale en Recherche Agronomique pour le Développement* (CIRAD), France and Coordinator of the Global Facilitation Unit for Agricultural Biodiversity Research at the International Plant Genetic Resources Institute (IPGRI), Italy. From 2003 to 2005 she was the Director of Research at CIRAD and prior to that, Director of Research at the International Centre for Research in Agroforestry (ICRAF) in Nairobi, Kenya. She has held leading scientific positions in both ICRAF and the International Institute for Tropical Agriculture (IITA) in Nigeria. Before joining the CGIAR she worked for eight years in academia, in Australia and the USA.

We look forward very much to Anne-Marie taking up this important position and applying her leadership skills and wealth of experience to support and strengthen the Future Harvest Alliance. This newsletter brings you updates on many of the important collaborative initiatives underway among the members of the Alliance and their partners, for which Anne-Marie's contribution—and that of the Office she will lead—will be fundamental.

Jim Godfrey, Chair, Alliance Board
Joachim Voss, Chair, Alliance Executive

In This Issue:

Updates from Center and Partner Collaborative Programs

Healing Wounds in the Horn of Africa

A panel of experts convened by ILRI on behalf of the Alliance of Future Harvest Centers met last October in Nairobi to discuss how research-based interventions can help emergency agencies deliver more relief per dollar. This is the topic of the CGIAR report *Healing Wounds*, published in 2005.

The panelists at the meeting included Glenn Denning, Director of the Millennium Development Goals Center of the UN Millennium Project, and Mark Winslow, co-author of *Healing Wounds*, in addition to the Directors General of ILRI and ICRAF.

Scientists shared evidence from five projects to illustrate how research can magnify the benefits of emergency aid:

- building early warning systems to help pastoralists cope with disasters in the Horn of Africa (ILRI and the Animal Agriculture Research Network of ASARECA, the Association for Strengthening Agricultural Research in Eastern and Central Africa)
- mitigating drought effects on livestock in the nine most drought-afflicted districts of northern Kenya (ILRI, *TerraNuova*, *Cooperazione Internazionale*, and *Vétérinaires Sans Frontières*)
- enhancing pastoralism in Africa's arid and drought-prone Horn, home to 25 million nomadic herders (Chris Field, an animal scientist now using ILRI geographic and poverty mapping data to help enhance the livelihoods of camel herders in northern Kenya)
- alleviating hunger through vitamin A-enhanced sweetpotato in conflict-ridden northern Uganda (CIP)
- optimizing seed aid interventions to rebuild agriculture after disasters in Sudan, Uganda and Somalia (ICRISAT)

The full story and links are posted on the home page of ILRI's website, www.ilri.cgiar.org

Generation Challenge Program: Big returns in outputs, new collaborations

The power of partnerships for delivering major research gains in genetic diversity and genomics is evidenced by two large Generation Challenge Program (GCP) collaborative projects initiated in 2004.

An IRRI-led project is isolating the genes that control tolerance to salinity and phosphorus-deficient soils in rice. Salinity and phosphorus deficiency are widespread problems in the rain-fed fields of the poorest farmers, and they often coexist. With improved protection against this dreaded duo, rice plants can better withstand drought conditions, representing a major boon for the millions of resource-poor farmers who rely on rice production in rain-fed areas for food and income.

The project brings together researchers from the University of California at Davis, Australia's Commonwealth Scientific and Industrial Research Corporation, Dhaka University in Bangladesh, the Indonesian Center for Agricultural Biotechnology and Genetic Resources, Japan's National Institute for the Agrobiological Sciences, and Iran's Agricultural Biotechnology Research Institute.

Another project is infusing the modern peanut with much-needed genetic diversity by recreating its original parentage. Thanks to Generation funding, the project leaders in Brazil—where the peanut originated—are able to collaborate for the first time with partners in Africa and Asia, where peanut is critical to the diets of the resource-poor.

The project is being implemented by partners from Brazil's national programs (Embrapa and the Catholic University of Brasilia), ICRISAT, the French Agricultural Research Center for International Development (CIRAD), Senegal's Regional Studies on the Improvement of Plant Adaptation to Drought (CERAAS) and Argentina's *Instituto de Botanica del Noreste*.

Both stories—and many others—can be found in the just-published GCP Research Highlights 2005, online at www.generationcp.org/brochure.php

HarvestPlus enters its third year of operations

As it enters its third year of operations, HarvestPlus is pleased to report that its partners have achieved decisive gains in improving the nutritional density of staple foods through a process coined as biofortification.

HarvestPlus scientists—based at CGIAR centers, national agricultural research systems, and advanced research institutions—have succeeded in developing:

- high-iron bean (CIAT)
- high-zinc maize (CIMMYT and IITA)
- high-iron-and-zinc rice (IRRI)
- high-beta-carotene sweetpotato and iron-dense potato (CIP)
- high-zinc wheat (CIMMYT)
- high-zinc pearl millet (ICRISAT)

In 2006, these crops will be taken to the field for further adaptive breeding and G x E analysis. It is expected that substantial progress will be made with other emerging HarvestPlus crops for which genetic variation is being assessed and pre-breeding activities have commenced. These activities are underway at CIAT, IITA, ICRISAT, ICARDA and INIBAP. Additional research on transgenics has demonstrated that nutrient-dense varieties of pigeon pea and ground nut are achievable, and exploratory transgenic research is also being conducted for maize, rice and wheat.

As these plant breeding and nutritional genomics activities move forward, setting the agricultural science foundation, HarvestPlus nutritionists and impact specialists are working to ensure that breeders are including sufficient quantities of nutrients in crops to make a measurable impact on human health. To do so they must take into consideration factors such as the complexities of bioavailability, the presence of anti-nutrients, and the ways in which foods are prepared and eaten by target populations.

Outside the laboratory, HarvestPlus communication and end-user specialists are encouraging researchers, development specialists and public policy enablers to consider biofortified staple foods as a sustainable and cost-effective nutrition intervention for the poor.

For further information visit www.harvestplus.org or contact Bonnie McClafferty, Communication Coordinator, HarvestPlus, at B.McClafferty@cgiar.org

Pantropic partners, powerful impact

The impact of the Alternatives to Slash-and-Burn Program (ASB) has grown exponentially over the years. In Brazil, for example, ASB was involved in restoring 80,000 hectares of pasture land to productive use through the implementation of forage legumes and low-cost fencing. This research has also saved an additional 2.5 million hectares of forest land that would have otherwise been converted to pastures. In Thailand, ASB worked with policy makers on the effects of traditional land use on watershed and forest management. As a result, livelihood insecurity was reduced among more than 6 million people.

Beyond these examples, ASB also contributes to capacity building and knowledge sharing through extensive training courses and the production of over 780 scientific publications. ASB partners include over 80 national and international research institutes, NGOs, universities, private enterprises, community organizations, and farmers' groups.

This diverse global consortium's vision is to ensure "flourishing forests and prosperous people across the tropics". Participatory research at 12 major sites in the Amazon, the Congo Basin, northern Thailand, and the islands of Mindanao and Sumatra has revealed some of the true causes of deforestation, as well as the tradeoffs required to improve the livelihoods of the 1.2 billion people living in the tropical forest margins.

The strength of this 11-year-old program—and the contributions of the many people involved in it—were recognized at the December CGIAR Annual General Meeting in Marrakech, where ASB was selected as the recipient of the CGIAR Outstanding Science Partnership Award for 2005.

For more information on ASB, visit www.asb.cgiar.org or contact Tom Tomich, the ASB Global Program Coordinator, at t.tomich@cgiar.org

Securing, not privatizing, the commons

To achieve hunger and poverty reduction, it is critical that the poor have secure rights to land and water, enabling them to grow food, invest in productive activities, and practice conservation measures such as planting trees. Yet the most vulnerable and marginalized rural people often lack access to natural resources and have no—or insecure—property rights.

Stakeholders from around the world will converge in Porto Alegre, Brazil from March 7-10 for an International Conference on Agrarian Reform and Rural Development. At that conference, IFPRI, IWMI, and other researchers from the CGIAR's Systemwide Program on Collective Action and Property Rights (CAPRI) will present evidence from their collaborative research to demonstrate that favoring individual private property can be counterproductive, leading to loss of rights by secondary users such as women or pastoralists.

"Common property often plays a critical role in the livelihoods of the rural poor," explains Ruth Meinzen-Dick, IFPRI senior research fellow and coordinator of CAPRI. "Individualizing rights to land or water often erodes systems of common property, threatening the use rights of many poor people."

Organized by the FAO and the Government of Brazil, the conference aims to bring about a new rural development paradigm based on social inclusion, environmental sustainability, and livelihood security for the poor.

For more information on CAPRI, visit www.capri.cgiar.org

Related publications:

CAPRI Policy Briefs, "Land Rights for African Development: From Knowledge to Action",

www.capri.cgiar.org/wp/brief_land.asp

2020 Focus 11, Policy Briefs, "Collective Action and Property Rights for Sustainable Development",

www.ifpri.org/2020/focus/focus11.asp

CAPRI Working Papers and other publications, www.capri.cgiar.org/pubs.asp#wp

Comprehensive Assessment launch this year

The Comprehensive Assessment of Water Management in Agriculture (CA) will reach a milestone in its dynamic, multi-stakeholder process when it launches its Assessment Report this year.

The CA critically evaluates the benefits, costs, and impacts of the past 50 years of water development, as well as today's challenges and the solutions people have developed. It aims to contribute to better investment and management decisions in water and agriculture in the near future and over the next 50 years.

The CA addresses the dual challenge of developing and managing water resources to end poverty and hunger, while reversing ecosystem degradation trends. It also recognizes the need for a shift in thinking and actions to meet this challenge. A diverse group of over 700 people from around the world have participated in the Assessment. The co-sponsors include the Convention on Biological Diversity, the CGIAR, the FAO, and the Ramsar Convention.

The CA is participating in two key events in 2006. In March, the CA session at the Fourth World Water Forum in Mexico, entitled "Assessing Livelihood and Environmental Synergies and Trade-offs for Water Management in Agriculture", will challenge current ways of thinking about the management of water in agriculture. In August, the *Summary for Decision Makers* will be presented at the Stockholm Water Week.

For further information on the CA and the Assessment Report, visit www.iwmi.cgiar.org/assessment/

Crop development efforts get major boost

The long, arduous and expensive process of developing new crop varieties received a major boost this week with the joint launch in Mexico and the Philippines of a new scientific program and facilities that unite key databases and research on the planet's three most important crops: rice, wheat and maize. A joint venture between IRRI and CIMMYT, the new Crop Research Informatics Lab (CRIL) is the first major output of an alliance that was formally established last year. The new lab at CIMMYT will link with existing facilities at IRRI.

"After several years of talking about a common platform for the development of new rice, wheat or maize varieties, we are now ready for real-world implementation," said IRRI Director General Robert S. Zeigler. "Not only will this reduce the time needed to develop new crop varieties—because all three are cereals and so share a range of common characteristics—but we also expect it to reduce the cost of such research.

"What is particularly exciting is that this platform will also be useful for other crops—often referred to as 'orphans'—that have yet to benefit from significant investments in genomics research," Dr. Zeigler added. "And, as we expand our data coverage, research in areas such as natural resource management and climate change will also benefit from our combined capacities."

Scientists at the new joint facilities are already working on the development of a single crop information system and comparative biology infrastructure for rice, wheat and maize that will greatly assist in the development of new crop varieties.

This collaboration will permit new kinds of comparative biology research to be conducted in collaboration with international partners. By adapting software such as the International Crop Information System and the International Rice Information System, CRIL researchers aim to offer plant breeders anywhere working on rice, wheat or maize unprecedented levels of integrated information on all three crops, greatly accelerating the process of developing new varieties.

"We believe the Alliance will not only enhance our vitally important partnerships with the national agricultural research systems of developing countries and advanced research institutions, but will also strengthen the Centers' contribution to the Millennium Development Goals," said CIMMYT Director General Masa Iwanaga.

Infra-red scanners help reclaim degraded land and boost crop productivity

An infra-red scanning tool developed at the World Agroforestry Centre is now being used in Kenya by the Millennium Village Project and in a World Bank scheme to restore thousands of hectares of degraded farm land to productive use.

Using infra-red (IR) light to detect minute differences in soil composition and structure—a process known as infra-red spectroscopy—the technique provides timely recommendations about how farmers can improve depleted soils and boost productivity.

Because it uses only light, the technique allows non-destructive analysis of soil and plant materials. Working from a digital scan, a "reflectance fingerprint" is obtained, which can be used to predict the nature of multiple soil properties. The technique is fast, economical, and does not require the costly chemicals used in conventional soil analysis.

Tests have shown that infrared analysis is also effective when used in conjunction with global positioning systems and satellite sensing to produce inexpensive maps that can pinpoint soil and plant nutritional

problems. ICRAF scientist [Keith Shepherd](#) notes that IR can also be used to measure implementation and compliance in environmental service payment schemes.

In addition to Kenya, the technology is slated for use in India, Mali, Mozambique, and Uganda starting in 2006.

Read more at www.worldagroforestry.org/eNewsletter/TransQuarterly2005.htm

Centers prepare for meeting of Convention on Biological Diversity

The 8 th Conference of the Parties to the Convention on Biological Diversity (CDB) will take place in Curitiba, Brazil at the end of March.

CGIAR Centers are preparing two side events for the meeting. The first of these, “Biological Diversity in Dry and Sub-Humid Lands for Human Wellbeing”, will illustrate how members of the Future Harvest Alliance have demonstrated the contributions of biodiversity to improved, sustainable livelihoods in these fragile environments. A second side event—organized with Brazil, Italy and the CBD—will contribute to discussions on the CBD’s cross-cutting initiative on biodiversity for food and nutrition by presenting the outputs of a recent stakeholder meeting.

The side events will be supported by two booths. One will feature the links between agricultural biodiversity, dietary diversity, and better nutrition and health. The other will mark 2006 as the International Year of Deserts and Desertification by focusing specifically on center activities related to arid lands. Posters are being prepared, with fact sheets to accompany the posters and give more detail, an approach that proved very effective at the 7 th session of the Conference of the Parties (COP7).

For more information, please contact r.raymond@cgiar.org, or visit www.ipgri.cgiar.org

Science Council Updates

Agriculture today: Challenges and prospects

The Science Forum at AGM 05 provided an opportunity for stimulating discussions among researchers and policy makers around the theme “Science for the Poor”. The discussions focused on current trends that shape world agriculture in five priority areas:

Plant breeding . In the context of genetic improvement, current advances in plant breeding were highlighted, including recent developments in molecular markers. Markers are used to improve the screening process and thus shorten the period required by large breeding programs to develop new varieties. The question of intellectual property rights and its impact on the distribution of benefits was also discussed.

Conservation of indigenous livestock. Indigenous livestock conservation is currently facing a number of critical challenges, ranging from mechanization and climate change to political instability and market competition. While local animal breeds are still considered a major source of income by the rural poor, livestock diversity is being lost at alarming rates because of urbanization and other factors. The Food and Agriculture Organization of the United Nations (FAO) is addressing this problem by maintaining and updating a comprehensive inventory of endangered livestock breeds. ILRI is contributing through the creation of an information system to improve regional information on ruminant breeds in Africa. This information will support national research institutes in immediate and long-term conservation efforts. The CGIAR is lending assistance through its research on breed characterization techniques across CG Centers.

High-value crops. Discussions also revolved around the major constraints to the production of high-value crops, such as fruits and vegetables. The CGIAR will play a role in several research areas, including the production of quality seed, post-harvest technologies, and labeling and certification in market systems.

Integrated natural resources management. It was demonstrated that analysis at the landscape level helps to integrate scientific knowledge, technological packages, and management approaches. The CGIAR will play an important role in both applied and basic research to solve practical problems in integrated natural resources management.

Poverty traps. The discussions did not exclude the social dimension of research on forests, land and water. The concept of “poverty traps” was analyzed with the aim of improving policy and institutional innovation for poverty reduction.

Collaboration Survey confirms lively interaction

In 2005, the CGIAR Science Council's Standing Panel on Mobilizing Science asked CG Centers to provide information on their ongoing collaborations with other organizations. The survey created a pool of useful information on CGIAR collaborations and confirmed that interactions within the CG system and outside of it are an integral part of Centers' activities. It also revealed that an important number of collaborators have a pervasive presence in the CG system, suggesting their potential as key external partners. Centers' responses confirmed that the CG system interacts actively with organizations in developing countries. It also highlighted the fact that although relatively few, collaborations with the North—especially with advanced research institutions and universities—are often considered by the Centers as highly relevant because they provide access to critical, complementary disciplinary expertise and material resources. Interestingly, Centers also indicated that funding considerations have rarely motivated their key collaborations.

Finally, yet importantly, Centers' responses highlight the fact that private sector collaborators are still rare in the CG system and are seldom considered by them as highly relevant. By contrast, Centers were often short-listed as key collaborators by others in the CG system.

For additional information regarding the Science Council and their work in the CGIAR system, please go to www.sciencecouncil.cgiar.org

News from System Office Members

Winds of change

Because of their autonomous nature, the 15 CGIAR Centers make many of their decisions independently. What goes on in any one Center often has not been disclosed to the other fourteen Centers. Over the years, the CGIAR Centers have developed, purchased or customized financial and administrative application systems, usually without seeking advice and feedback from other Centers. Two attempts to gather data on these systems have been made in the past, the results of which are now largely outdated.

Today, however, the scenario is different. Things are changing, as a successful survey sponsored by the CGIAR Internal Auditing Unit (IAU) and the Office of the Chief Information Officer (CIO) shows. The survey on Financial/Administrative ICT Systems was carried out between September and December 2005. It gives Centers access to information about the systems that are used by the all 15 Centers, empowering consenting parties to join forces.

As a result of the survey, which complements and builds on the previous studies, Centers can now:

- consider lessons learned when they plan to buy or change a system similar to one used elsewhere, both within and outside the CGIAR
- learn from Centers that use the same applications by exchanging experiences, and by developing user groups to maintain the exchanges on an ongoing basis
- identify functionalities of their systems that they are not using, but that they may consider using if they knew more about them
- assess prospects and opportunities for shared services based on the clusters of Centers that either use the same systems or might converge in the longer term to a common set of application systems

Centers welcomed this initiative and were more than willing to share information, as indicated by the level of response for the survey: 100%. Discussions have begun between a few Centers seeking synergies and there is a raised level of awareness that will fuel the willingness to collaborate. It is anticipated that this effort will be the start of an on-going activity to maintain up-to-date information on these applications installed at the various Centers.

A new wind of “working together is good” is sweeping through the System.

Note: In some cases, the information gathered on systems may be incomplete, or in need of refinement and/or updating. Centers are invited to forward updated information at any time to the IAU Director, j.fitzsimon@cgiar.org and/or to the CIO, e.porcari@cgiar.org

Partners in prevention

Collaboration and cooperation are vital to the success of the ICT-KM (Information and Communications Technology and Knowledge Management) Program. The backbone of the Program comprises dynamic individuals: busy professionals who juggle the responsibilities of their nine-to-five jobs with the added demands of their respective projects.

If you look behind the Enterprise Security and Business Continuity Planning (ESBCP) Project, you will find Vima Salazar’s fingerprints all over the place. Vima, who is part of the Internal Audit Unit (IAU), has been actively involved in supporting the Chief Information Officer (CIO) and the IT Managers community in the conceptualization, planning and execution of this Project.

Previously known as the Disaster Resilience and Data Preservation Project, this initiative was re-engineered to respond to changes in technology and organizational directions and is now headed by IT Manager Paul O’Nolan, who also leads the Advanced Research Networks (ARN) Project at IRRI.

The ESBCP Project aims to protect the valuable information assets developed, maintained and owned by the CGIAR Centers; manage information security risks across these Centers; and minimize disruption in operations in the event of a disaster by implementing a comprehensive data resiliency program.

In 2005, the ESBCP Project was piloted at IRRI; the first of three regional workshops on business continuity planning (BCP) and CGIAR IT security was held at the Center in November. In January 2006, another valuable IAU member, John Mwangi, participated in a regional workshop in Nairobi. The third workshop is currently scheduled for the Americas in March, with Vima representing IAU.

This e-news has been prepared by the *Future Harvest Alliance Office, a unit of the CGIAR System Office*