CGIAR NEWS

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH ▪ DECEMBER 2002

AGRICULTURE FOR GROWTH AND DEVELOPMENT:
From Words to Action at Annual General Meeting

"Agriculture for Growth and Development" was the theme of the 2002 Annual General Meeting (AGM) of the Consultative Group on International Agricultural Research (CGIAR) held in Manila during October 30-November 1, 2002.

"Increased support to public goods agricultural research, expanded public-private partnerships, and opportunities to engage with and listen to farmers were the major outcomes of the Manila AGM" said Ian Johnson, CGIAR Chairman. "Agricultural development is essential for creating responsible growth, reducing poverty, and protecting our environment."

CGIAR

The Hon. Teofisto Guingona, Vice President of the Philippines, addresses the CGIAR Stakeholders Meeting, calling for renewed efforts to redress North-South imbalances in trade and subsidies.

More than 500 participants from over 40 countries attended the meetings hosted by the Government of Philippines. The AGM was held outside of Washington for the first time. The Philippines joined the CGIAR in 1980, and hosts the International Rice Research Institute (IRRI), which together with CIMMYT was the birthplace of the Green Revolution. Manila was chosen because of the Philippines' international reputation in agricultural research. Significant outcomes of the Manila meetings include:

- Increased commitment from Canada, USA, the Netherlands, and Spain for generating farming solutions that benefit poor farmers of the developing world, particularly in Africa.

Continued on page 4

CGIAR CHALLENGE PROGRAMS LAUNCHED
New Effort Forges New Science-for-Development Partnerships

Water is to agriculture, what oxygen is to life: one is essential for sustaining the other. Water availability is set to become one of the most pressing issues of the 21st century. Currently, more than 40 percent of the world's population lives in water-stressed river basins. Improving the productivity of water in agriculture—growing more food using less water—while improving rural livelihoods and protecting the environment is essential for sustainable development.

Equally critical is the need to deliver nutritious food by addressing the critical problem of micronutrient deficiencies in women and children living in the developing world. More than 800 million people do not have enough food to meet their basic daily energy needs. Even more—3 billion—suffer the effects of micronutrient deficiencies. Women and children in Sub Saharan Africa, South and Southeast Asia, Latin America and the Caribbean are especially at risk of disease, premature death and impaired cognitive abilities because of diets poor in iron, vitamin A, iodine and zinc.

Both issues, the water crisis, and nutrient deficiencies in women and children in the developing world will become the major challenges of the

Continued on page 2

CHALLENGE PROGRAMS LAUNCHED *Continued from page 1*

21st century. They represent global problems of such magnitude that they demand a new approach to problem solving. Recently, the CGIAR has developed a programmatic approach which will ensure that science offers practical solutions to these pressing challenges. CGIAR Members, CGIAR Centers and partners created Challenge Programs, a new approach geared to solving global problems and contributing to achieving the Millennium Development Goals.

The approach brings together some of the world's best minds to focus on problems of global proportions. Participants will include scientists from the CGIAR Centers; national research organizations and advanced research institutes, universities and the communities and organizations most affected. Together the participants will design programs of research, implementation and evaluation and develop new and effective solutions.

According to Francisco Reifschneider, Director of the CGIAR, "Only by pooling ideas, knowledge and experience can we hope to achieve breakthroughs in the struggle to create new solutions to global problems. Problems of this magnitude demand a new approach. If we are serious about achieving real change we must find new ways to extend our partnerships to national and international institutions, and the private and non-government sectors, North and South alike."

The CGIAR Challenge Programs on Water and Food and Biofortified Crops for Improved Human Nutrition were approved at the CGIAR's Annual General Meeting in October. The tasks and resources required are substantial. The Water and Food Challenge Program requires $100 million over five years to achieve its objectives while the Biofortified Crops Human Nutrition Challenge Program needs $88 million over ten years. But already commitments have been made. The World Bank grant provided to the CGIAR will support development of Challenge Programs. The Netherlands has committed 25 million Euros to the Water and Food Challenge Program, and the Biofortified Crops Challenge Program has also attracted substantial resources.

At the CGIAR AGM, Ian Johnson, Vice President ESSD and Chair of the CGIAR, said, "I am delighted to see this level of international commitment to solving the problems of hunger and poverty. Major commitments from the Netherlands and initial pledges from the several other donors will increase our ability to deliver science-based solutions to the challenges of water use and food security for poor people."

Biofortified Crops for Improved Human Nutrition

This Challenge Program is led by IFPRI and CIAT. The introduction of biofortified crops offers real solutions

CIMMYT/Gene Hettel

Rice crop in a rice-wheat cropping area in Bangladesh.

IN THIS ISSUE

1 CGIAR Annual General Meeting

1 Challenge Programs Launched

4 New Members Expand CGIAR Alliance

5 "Fish for All" Initiative

6 First Robert McNamara Seminar held in Tokyo

7 Private Sector Support for Agricultural Push

8 CGIAR Science and Communication Awards

10 Photo Essay

12 World's Leading Environment Financier delivers 2002 Crawford Lecture

13 New Global Partnership to Improve Cassava Production

14 World Bank launches Strategy "Reaching the Rural Poor"

15 New Software Licensing Agreement with Microsoft

15 Announcements

Editor: Sarwat Hussain
Issued by the CGIAR Secretariat
Tel: (1-202) 473-8951
Fax: (1-202) 473-8110
E-mail: cgiar@cgiar.org
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CIMMYT/Gene Hettel

Guatemalan family shelling maize.

for vulnerable people suffering micronutrient deficiencies. Crop varieties bred for increased mineral and vitamin content offer sustainable and low-cost ways to reach people with poor access to formal markets or health care systems, and to profoundly improve micronutrient intakes.

The CGIAR Centers have already demonstrated the ability of crop research to improve the nutrient content of staple crops including iron-rich rice developed at IRRI, quality protein maize developed by CIMMYT, sweet potato and cassava high in carotene developed by CIP and IITA respectively. The challenge now is to explore ways to further improve these crucial varieties, examine potential for nutrient enhancement in additional crops, and determine effective continuing assessment and dissemination policies.

An international coalition will bring together an extraordinary range of knowledge and ability including expertise in plant breeding, human nutrition, plant genomics, social behavior and policy analysis. IFPRI and CIAT will coordinate plant breeding, nutrition, crop dissemination and policy analysis activities which will be carried out at CGIAR Centers, national agricultural research and extension institutions and universities in developed and developing countries. Non governmental organizations, farmers organizations and private sector groups will strengthen the alliance and provide linkages to consumers.

The deployment of just six micronutrient enriched staple crops could reach roughly 90 percent of the population at risk from micronutrient malnutrition and improve the health and lives of billions of people.

Water and Food

The Challenge Program on Water and Food is a partnership between national and international research institutes, NGOs, and river basin communities. The Program's goal is to increase food production to achieve internationally adopted food security and poverty eradication targets by 2015. And to do this without increasing global diversions of water to agriculture above the levels of 2000. This will be a 20-25 year effort, with a significant impact on reducing poverty, while improving water use policies and institutions.

By opening the field to participation by a broad range of partners outside the traditional agricultural research community, the Program will ensure continuity in local communities where the impacts of the research are focused.

The Program's initial phase will operate in 15 developing country river basins to identify and encourage practices and institutional strategies that improve water productivity. In these Benchmark Basins, the Program will also monitor progress towards food security at the household level, poverty alleviation, improved health and environmental security.

The Water and Food Challenge Program will be managed by an 18-member consortium, composed of five CGIAR Centers, six national agricultural research and extension systems, four advanced research institutes and three international NGOs. CIAT, IFPRI, IRRI, IWMI, and the WorldFish Center will act as focal points for synthesizing results. They are responsible for sharing knowledge and lessons learned at the international and policy levels.

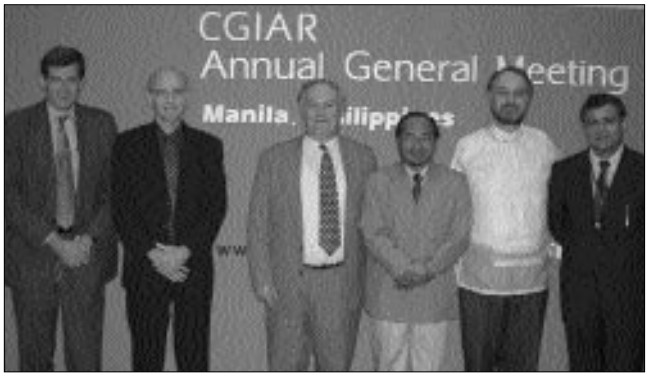
The consortium will disburse 75 percent of the project funding through a competitive grant scheme beginning in 2003 and at least 33 percent of funding for each project will be directed to national agricultural research organizations.

For more information please visit **www.cgiar.org/iwmi/challenge-program** or **www.cgiar.org**

FROM STRENGTH TO STRENGTH: NEW MEMBERS EXPAND CGIAR ALLIANCE

Four new members joined the CGIAR alliance at the Annual General Meeting: Israel, Malaysia, Morocco, and the Syngenta Foundation for Sustainable Agriculture were acclaimed as new members.

The new members bring the total CGIAR membership to 62, including 24 developing countries, 23 industrialized countries, and 4 private foundations.



CGIAR

CGIAR alliance strengthened with new members (L to R): Andrew Bennett (Syngenta Foundation), Nachman Paster (Israel), Ian Johnson (CGIAR), Saharan Anang (Malaysia), Francisco Reifschneider (CGIAR), and Hamid Narjisse (Morocco).

"I am delighted to see this increase in the membership of the CGIAR," Ian Johnson, Chair of the CGIAR said today, "This decision demonstrates the continuing importance of new institutions like the CGIAR alliance. This new membership is further recognition of the value of the world class research work undertaken by the Future Harvest Centers of the CGIAR and will increase the resources available for solving the problems of poverty, hunger and under development."

According to Mr. Johnson: "New membership continues to strengthen the alliance. We are extremely proud to have such a strong developing country membership. Our four new members bring a wealth of expertise and experience and will enable the CGIAR to better shape policy towards the developing world and ensure our new members have even greater influence on the development of global public goods for developing countries."

For more information, click on **www.cgiar.org**

2002 ANNUAL GENERAL MEETING *Continued from page 1*

- Strengthened partnerships: four new members—Israel, Malaysia, Morocco, and the Syngenta Foundation—joined the CGIAR alliance. Twenty-four developing and 22 industrialized countries, four private foundations, together with many other partners now constitute the strengthened CGIAR alliance. Malaysia hosts the WorldFish Center.
- Approval of two innovative research-for-development "Challenge Programs" focusing on water for food and biofortification of crops for improved human nutrition and incomes. The Challenge Programs build on core CGIAR competencies while attracting additional financial, technical, and human resources, engaging a broader range of partners, and tackling development issues of global significance.
- Conferment of CGIAR Science Awards for boosting chickpea production, integrated pest management, improved water policies, and saving biodiversity. Recognizing the critical importance of communicating the outcomes of scientific work to the general public, two new communication and journalism awards were announced and conferred.
- In-depth interaction with stakeholders on important issues such as streamlining governance, catalyzing and promoting innovation and technical change in agriculture, combating desertification, aligning research to achieve objectives of international conventions on biodiversity and desertification, and strengthening national agricultural research capacities.

"The Manila meetings and field visits to IRRI and the University of Philippines-Los Baños provided CGIAR members with a unique opportunity to witness first-hand the CGIAR's efforts in mobilizing global knowledge for local impacts" said Francisco Reifschneider, CGIAR Director. "The CGIAR is grateful to the Government of Philippines for hosting the meeting and for facilitating interaction with farmers' groups and local scientists."

Leading Philippine dignitaries, including Vice President Teofisto Guingona and Secretary of Agriculture Mr. Leonardo Montemayor addressed and participated in the meetings.

For more information on the AGM, Challenge Programs and Science Awards, visit **www.cgiar.org**

"FISH FOR ALL" SUMMIT FOCUSES ON DECLINING AQUATIC ENVIRONMENT AND FISHERIES

New Initiative Seeks to Mitigate Adverse Effects on Poor People

Worldwide, aquatic environments and their productivity are on the decline. According to one estimate, 58 percent of the world's coral reefs and 34 percent of all fish species are at risk from human activities.

The negative impacts of these trends are profoundly affecting the well-being of the world's fishers, 85 percent of whom are in Asia and another 7 percent who practice artisanal fishing in Africa. Many of them are the poorest of the poor. New research conducted by the WorldFish Center and IFPRI shows that global fish production may not keep pace with population growth, a shortfall predicted to have disastrous consequences for more than one billion people who rely on fish for food, nutrition, and incomes.

"Fish is the fastest growing source of food in the developing world," said Meryl Williams, Director-General, WorldFish Center. "Demand greatly exceeds supply, and the problem is getting worse. Almost three-quarters of the 130 million tonnes extracted in 2000 came from fish stocks already depleted, over-fished or fully exploited."

So severe are the threats to the world's fisheries that the Plan of Implementation of the 2002 Johannesburg World Summit on Sustainable Development (WSSD) has set the ambitious goal of restoring depleted fisheries by 2015.

Seeking to raise awareness and foster partnerships for creative solutions to address the problem, WorldFish Center launched a new "Fish for All" initiative that will catalyze partnerships for reversing the declines in living aquatic resources and finding ways to restore the livelihoods, food and incomes of those who use and depend on fish.

The "Fish for All" Summit was a tremendous success. Nearly 300 participants from over 40 countries including ministers responsible for fisheries in Asia and Africa, fisheries specialists, development assistance experts, fisher organizations, and civil society representatives attended the Summit. Some of the concerns and issues addressed at the Summit included:

- Between 1970 and 1998, the number of fishers more than doubled worldwide (28 million, up from 13 million) with 95 percent of them living in developing countries
- Aquaculture provided 25 percent of the world's fish supply in 1998, but aquaculture can pollute waterways and lead to the wholesale transformation of landscapes
- Climate change patterns caused Chile's anchovy catch (the world's largest) to fall 73 percent in 1998, while the global catch fell 7.5 percent compared to 1997
- Fishing is a dangerous occupation—a person is 10-15 times more likely to die while fishing than while mining.

The Summit concluded that given the many benefits of wholesome food, livelihoods and environments that are based on fish and other aquatic life, all people should embrace the vision of "Fish for All."

"The problems are multiplying, and the time has come for an informed, inclusive, public dialogue," added Dr. Williams. "The world lacks a neutral forum in which to air dilemmas over different values. The ongoing 'Fish for All' initiative will help establish sustainable environmental practices along the world's rivers and coastlines, and in its lakes, seas and oceans."

For more information, click on **www.fishforall.org** or **www.worldfishcenter.org**

FIRST ROBERT S. McNAMARA SEMINAR HELD IN TOKYO

The value of North-South science partnerships was the principal theme at the inaugural Robert S. McNamara Seminar "Role of Agriculture in Sustainable Development" held at United Nations University.

"Japan's scientific excellence is well-known," said Ian Johnson, CGIAR Chairman and World Bank Vice President for Environmentally and Socially Sustainable Development. "When outstanding science is combined with strong financial backing, the results can be revolutionary as in the case of the New Rices for Africa that are changing the lives of poor farmers across Africa."

New Rices for Africa, or NERICAs, were developed by WARDA, with support from many investors including Japan. NERICAs combine the high productivity of Asian rices with the drought tolerance capabilities of traditional African rices. NERICAs hold great potential for African rice farmers and are helping to substantially reduce West Africa's multi-million dollar rice import bills.

The theme of science partnerships for development was taken up by the keynote speaker, Monkumbu S. Swaminathan, World Food Prize laureate and chairman of the CGIAR's Genetic Resources Policy Committee. "The poor have been bypassed by modern technological advances," he said. "Reaching the unreached, and including the excluded have to be important components of contemporary science and technology policies and development strategies," he urged. Recounting the continuing struggle against hunger, he outlined the important role of technology in advancing food production without causing ecological harm. He noted that Japan is a world leader in rice research and is at the forefront of global efforts to decode the rice genome. Japan is also leading the movement for achieving sustainable advances in agricultural productivity while giving concurrent attention to ecology and economics.

Mr. Kitamura, Vice Minister, Japanese Ministry of Agriculture, Forestry and Fisheries addresses the Robert S. McNamara seminar. Japan is a world leader in rice research.

Leading Japanese public officials, including Mr. Kitamura, Vice Minister in the Japanese Ministry of Agriculture, Forestry and Fisheries and Mr. Shindo, Parliamentary Secretary for Foreign Affairs, addressed the meeting. A lively Q&A session followed and extended into the lunch where NERICAs were served.

The Robert S. McNamara Seminar was organized by the CGIAR, the Japanese Ministry of Foreign Affairs and Ministry of Agriculture, Forestry and Fisheries, and United Nations University, with the support of the World Bank. Mr. McNamara is a founding father of the CGIAR, and has made extraordinary contributions to supporting public goods agricultural research.

Addressing the meeting by video, he noted that the CGIAR has a tremendous record of achievement, and urged that future efforts must continue to focus scientific research for increasing food production and incomes in the poorest countries.

A highlight of the seminar was a panel discussion featuring Ronald Cantrell of IRRI, Masa Iwanaga of CIMMYT, and Kanayo Nwanze of WARDA, moderated by Francisco Reifschneider, CGIAR Director. Maize, rice and wheat are the three most important cereals for human diets, accounting for the bulk of caloric intake. The three world-class science leaders described the positive impacts and benefits of Japan's support to the CGIAR, calling for the international community to come together to ensure that advances in agricultural science and technology deliver real and lasting benefits to people living in poverty worldwide. Japan is one of the three largest investors in the CGIAR, together with the World Bank and United States. Many hundreds of Japanese scientists have worked in CGIAR Centers, contributing scientific, managerial and technical expertise.

PRIVATE SECTOR SUPPORT FOR AGRICULTURAL PUSH

A major outcome of the World Summit on Sustainable Development (WSSD) was the forging of partnerships focusing on five priority areas—agriculture, biodiversity, energy, health, and water. At the Summit, in addition to the negotiated implementation plan, 220 partnership initiatives were announced.

Agricultural development is pivotal for the sustainable development agenda. Of the 1.2 billion people living on less than $1 per day, the majority live in rural areas. More than 800 million people go hungry every day. Food demand is expected to double over the next 30-40 years. Environmental sustainability can only be achieved by curbing the adverse impacts of agricultural practices. Science-based solutions are urgently needed to address the crops, ecologies, and development needs of millions of poor farmers.

These messages are echoed in a special paper "A Framework for Action on Agriculture" commissioned by Mr. Nitin Desai, Secretary-General, WSSD. It notes "… agriculture is important in stimulating sustainable economic growth and rural employment, and it is the cornerstone for food security and poverty reduction" and continues with a call for "cooperative actions needed on the part of governments, businesses, civil society, international organizations and other relevant stakeholders to address the challenges."

In a significant development, the CEOs of 11 major private sector agricultural companies signed a "Declaration of Corporate Support" pledging support for public-private sector cooperation in agricultural research and development, as a contribution to the Millennium Development Goals and WSSD. The declaration urges the CGIAR to "continue its role of leadership in exploring and implementing opportunities for public and private sector institutions in North and South to seek the most effective ways for sharing knowledge in support of research for agricultural development."

CIMMYT

Public-private partnerships that mobilize cutting-edge science for boosting crop yields and farmer incomes are urgently needed—agricultural growth is pivotal for sustainable development and meeting the targets of the Millennium Development Goals.

"The declaration makes a tangible contribution to the notion of public-private partnerships, signaling a commitment for finding new mechanisms that address the needs of resource poor farmers," said Sam Dryden, who heads the CGIAR Private Sector Committee and is one of the signatories. "We represent a mix of private sector entities from the North and the South, large as well as small, and all of us have operations in developing economies."

"Agricultural growth is a precondition for sustainable development and it is heartening to see agriculture getting its due attention in development policy and debates" said Ian Johnson, CGIAR Chairman and World Bank Vice President. "The challenge is to ensure that growth in the agriculture sector is environmentally responsible and socially acceptable."

The declaration is an initiative of the CGIAR Private Sector Committee which seeks to promote public-private sector collaboration in agricultural research for development. The 16 international agricultural research centers supported by the CGIAR are leading producers of new agricultural technologies within a public goods framework in which research products and processes are freely available to all.

Signatories are B. R. Barwale, Mahyco (India), Sam Dryden, Emergent Genetics (USA), A. Charles Fischer, Dow AgroSciences (USA), Heinz Imhof, Sygenta (Switzerland), Howard L. Minigh, Agriculture and Nutrition, Dupont (USA), Alan Reade, Merial Limited (UK), Hans W. Reiners, Agricultural Products Division, BASF AG (USA), Alfonso Romo, Seminis (Mexico), Warren R. Staley, Cargill (USA), Hendrik Verfaillie, Monsanto Company (USA), and Jochen Wulff, Bayer CropScience AG, (Germany).

2002 CGIAR SCIENCE AWARDS

Each year, the CGIAR recognizes the work of its leading scientists, support teams, and research partnerships, selected by the criteria of novelty, relevance, applicability and development impact.

The 2002 CGIAR Science Awards were given for scientific advances that have led to new crop varieties that mature early and resist drought, novel methods for screening seed samples for enhanced biosafety, improved water policies, and new biological control methods for curbing the spread of crop disease.

"The awards serve twin purposes," said Ian Johnson, CGIAR Chairman. "They recognize outstanding scientific achievement, while singling out those efforts that positively impact the lives of poor farming communities worldwide. This is science aligned with responsible wealth creation, by improving people's lives and protecting the planet's environment."

The awards were presented at the Annual General Meeting in Manila.

Jagdish Kumar and Ian Johnson (center)

King Baudouin Award to **Jagdish Kumar** representing ICRISAT and ICARDA scientists for developing new chickpea varieties with higher tolerance to drought and heat, better resistance to pests and diseases that provide stable and economically profitable yields.

Chickpea *(Cicer arietinum L.)* is an important food legume, rich in protein, and grown on 11 million hectares by poor farmers in South and Southeast Asia and West Asia and North Africa. The benefits of this research are having positive impacts in Bangladesh, Ethiopia, India, Myanmar, Nepal, Syria, and other rainfed agricultural areas.

Marilyn Louise Warburton and Ian Johnson

Science Award for Promising Young Scientist to **Marilyn Louise Warburton, CIMMYT**, for developing an inexpensive, fast, and replicable methodology for accurately analyzing genetic diversity in maize and wheat seeds that uses molecular characterization techniques. The new protocols developed by Ms. Warburton and her colleagues have been used for rapid screening of CIMMYT's maize germplasm for the occurrence of transgene sequences.

Science Award for Outstanding Scientist to **Tushaar Shah, IWMI** for exceptional work in improving water policies, especially in the sustainable management and use of groundwater resources. Shah's research has looked at a broad range of issues including energy subsidies in the water sector, strengthening and reform of water institutions, and irrigation management. He is widely regarded as one of the world's most influential thinkers on water policy, recognized by governments, public

Tushaar Shah and Ian Johnson

and private donor agencies and NGOs alike.

Science Award for an Outstanding Scientific Support Team to **Imelda Revilla and colleagues, IRRI**, for the project "Exploiting Biodiversity for Sustainable Pest Management." By planting different types of rice alongside each other, the research team was able to achieve near total control of the devastating rice blast disease. For millennia, farmers have used nature's biodiversity to

control pests, but this project showed them how cutting-edge science can be applied to the problems of pest management for achieving optimal results and ensuring sustainability. In China, the project has successfully curbed the spread of rice blast disease, reducing pesticide use, increasing farmer incomes, and protecting human health and the environment. Team members include Nancy Castilla, Isabelita Oña, Alicia Bordeos, Marietta Baraoidan, Veritas Salazar, Maximino Banasihan, Florencio Blaneson, Flavio Maghirang, and Crisanta Culala. The project's find-

ings were published in *Nature* in 2000 and were hailed by the *New York Times* as a "stunning success."

Ruth Meinzen-Dick and Ian Johnson

Science Award for Outstanding Partnership to **Ruth Meinzen-Dick, IFPRI**, representing the **Collective Action and Property Rights (CAPRi)** program—a CGIAR systemwide initiative spanning all 16 Future Harvest Centers, 400 national research institutes, universities, advanced research institutes, and NGOs. CAPRi has contributed to a greater understanding of the important role of institutions that promote collective actions and property rights in determining the efficiency, sustainability and equity components of natural resource systems. This partnership has contributed to the development of coherent frameworks, research methodologies, and cross-comparable case studies that enable the development of locally relevant policies and institutions.

Science Award for an Outstanding Scientific Article to **Jeffrey Sayer of the World Wildlife Fund** and **Bruce Campbell of CIFOR** for their article "Research to Integrate Productivity Enhancement, Environmental Protection, and Human Development" published in *Conservation Ecology*. The article demonstrated why integrated natural resource management research is necessary to meet the challenges of poverty and environmental sustain-

Bruce Campbell and Ian Johnson

ability. Prior to joining the World Wildlife Fund, Sayer served as Director General of CIFOR.

2002 Awards for Outstanding Journalism and Communications

To promote the importance of science in the broader community and the significance of communications in research and development work, the CGIAR initiated two new awards for science communication in 2002. The new awards acknowledge journalists, scientists, and communications professionals working in the field of science communication.

Ian Johnson and Fred Pearce

Science Award for Outstanding Journalism to **Fred Pearce**, freelance journalist, for his article "Desert Harvest" published in *New Scientist* (27 October 2001) and "The King of Cowpea" in *Geographical Magazine*. Pearce's writings highlighted the successes of science for development in Africa, communicating with different target audiences and carrying important messages for policy makers, donors and the general public.

Science Award for Outstanding Communications to **Christopher Barr of CIFOR.** Barr's research has focused on Indonesian forest policy and the role of financial institutions in funding large-scale investments in forest-based industries. Over the past three years, his research has examined the factors driving the rapid expansion of Indonesia's pulp and paper sector, and the financial risks associated with the fiber supply strategies of the sector's major producers. He is the author of "Profits on

Christopher Barr and Ian Johnson

Paper: Political Economy of Fiber, Finance, and Debt in Indonesia's Pulp and Paper Industry" (2000) and "Banking on Sustainability: Structural Adjustment and Forestry Reform in Post-Suharto Indonesia" (2001). His persuasive writings have appeared in *The Asian Wall Street Journal*, *Far Eastern Economic Review*, *International Financing Review-Asia*, the BBC's *Business Hour* and in mainstream Indonesian media.

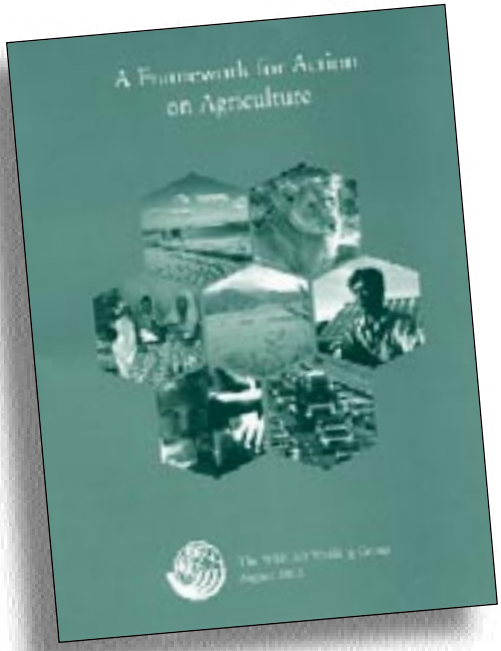
The evaluation and selection panels for the CGIAR Science Awards were led by an eminent group of scientists, including Emil Javier (Chairman of the CGIAR Science Council), James Cook (Washington State University), Marlia Nutti (Embrapa-Brazil), Jules Pretty (University of Essex), William Dar (ICRISAT), Robert Lamb (TVE International UK), and Maria Celeste Cadiz (University of Philippines, Los Baños).

PHOTO ESSAY: RETURN OF AGRICULTURE AND RURAL DEVELOPMENT ISSUES TO THE INTERNATIONAL DEVELOPMENT AGENDA

2002 has been a banner year for agriculture and rural development. A series of high-profile events (U.N. Preparatory Committee meetings, World Food Summit: Five Years Later, World Summit on Sustainable Development (WSSD), followed by the CGIAR Annual General Meeting), offered opportunities for key interventions and discussions led by Ian Johnson, Francisco Reifschneider, and other partners. All helped refocus international attention on the important contributions of agriculture to the overall sustainable development agenda.

This photo essay seeks to provide a snapshot of this journey, highlighting CGIAR engagement in and contributions to these important events.

In June 2002, at the Preparatory Committee meetings in Bali, the CGIAR co-hosted a Ministerial Roundtable on "Agriculture for Food Security and Sustainable Rural Development." H.E. Bungaran Saragih, Indonesian Minister of Agriculture and H.E. Eveline Herfkens, Dutch Minister of Development Cooperation co-chaired the meeting. Ian Johnson, Francisco Reifschneider, 12 Ministers, and more than 100 public, private, and civil society representatives participated.



"Some 70 percent of poor and hungry people in developing countries live in rural areas. Agricultural productivity growth can bring about swift and sustainable reductions in hunger and poverty, for farm incomes rise when productivity increases."

Excerpt from "A Framework for Action on Agriculture," a paper prepared for WSSD. The CGIAR was an active participant in the WEHAB Working Group on Agriculture.

The World Summit on Sustainable Development held in Johannesburg was a landmark event. Here, Ian Johnson, CGIAR Chairman, joins Lennart Bage, President, IFAD in launching a new report "The Rural Poor: Survival or a Better Life."

Adel El-Beltagy, incoming Chairman of the Center Directors Committee and Director General, ICARDA, presents the CGIAR statement "Mobilizing Science for Growth and Sustainable Development: The Power of Partnership" to the WSSD plenary.

Mr. Nitin Desai, Secretary-General, World Summit on Sustainable Development, addressed the Bali Ministerial Roundtable.

In June 2002, FAO hosted the World Food Summit: Five Years Later. This key event helped refocus world attention on the scourge of hunger. Nobel laureate Norman Borlaug and H.E. A. Bello, Nigerian Minister of Agriculture, exchange views at the Summit.

At the World Food Summit, global efforts to conserve plant genetic resources gained momentum. Louise Fresco, Assistant Director-General, FAO invited members to sign the International Treaty on Plant Genetic Resources for Food and Agriculture. The treaty recognizes the 530,000-strong CGIAR germplasm collections as a central pillar of the conservation effort.

The CGIAR was privileged to have a booth at the World Food Summit. Coosje Hoogendoorn of IPGRI (center) chaired a CGIAR systemwide Task Force for the 2002 Summits.

H.E. Leonardo Montemayor, Secretary of Agriculture, Philippines, welcomes Mohamed El-Ashry to the CGIAR Annual General Meeting. A major item of discussion at the AGM was follow-up to the 2002 Summits.

H.E. Yoriko Kawaguchi, Japanese Foreign Minister, shakes hands with Kanayo Nwanze, Director General, WARDA, to celebrate the success of the New Rices for Africa (NERICAs)

In Johannesburg, Jacques Diouf, Director-General, FAO, joins CGIAR Cosponsors and scientists for a discussion of "Challenge Programs"—new research initiatives that are helping tackle problems of global significance and broadening partnerships for maximum development impact. The CGIAR Challenge Programs were included in the list of partnership initiatives announced in Johannesburg.

"Water. Energy. Health. Agriculture. Biodiveristy. Five areas in which progress is possible with the resources and technologies at our disposal today. Five areas in which progress would offer all human beings a chance of achieving prosperity that will not only last their own lifetime, but can be enjoyed by their children and grandchildren too."

Kofi Annan, Secretary General, United Nations, May 2002—from a speech outlining priorities for sustainable development.

James D. Wolfensohn (World Bank President) and Prince Willem Alexander of The Netherlands visited the Waterdome. Ian Johnson, Francisco Reifschneider, Frank Rijsberman, and IWMI colleagues briefed the VIPs about CGIAR's efforts to improve water productivity in agriculture.

MOHAMED T. EL-ASHRY, GEF CHAIRMAN AND CEO DELIVERS 2002 CRAWFORD LECTURE

"Ecological Sustainability and Food Security—Challenges and Opportunities" was the theme of the 2002 Sir John Crawford Memorial Lecture delivered by Mohamed T. El-Ashry, Chairman and CEO, Global Environment Facility (GEF).

Highlighting the challenges of achieving ecological sustainability and its links to food security, Mr. El-Ashry noted that the ability of our planet to support life depends on its continued capacity to maintain key ecological functions. This in turn, he said, is the foundation of sustainability in all forms of human activity, none more so than the sustainability of agriculture and fisheries for food security.

"CGIAR's strategic research agenda should be aimed at achieving global sustainability and the Millennium Development Goals," urged Mr. El-Ashry.

GEF

2002 Crawford Lecturer Mohamed El-Ashry, CEO, Global Environment Facility (GEF)

The lecture suggested priority areas for CGIAR research, including a renewed frontal attack on problems of land and water management, mitigating the adverse impacts of global climate change, and paying increased attention to the needs of smallholder farmers practicing agriculture in marginal lands. Looking to the future, harmonizing growth and productivity with sustainability will be critical. Bringing growth and environmental protection into harmony will require forsaking single-sector approaches that rely too heavily on short-term technical fixes and end up causing long-term environmental degradation. Policy and institutional issues must be addressed, including pricing of natural resources and counter-productive agricultural subsidies.

More needs to be done for spreading the word about sustainable agriculture, water-saving irrigation, and other common sense practices that work. Science and modern information technologies must be harnessed, including tapping traditional and indigenous wisdom of farmers. Also needed are systems of land tenure that do justice to land and the people who work it. Highlighting the seriousness of gender imbalances, he noted that one third of all rural households are headed by women, yet women own only two percent of the land. Summoning and perpetuating the necessary political will is key, including strengthening our partnerships, multiplying our resources, and increasingly focusing on on-the-ground results.

The lecture honors the memory of Sir John Crawford, a CGIAR founding father and first Chairman of the Technical Advisory Committee. It is supported by the Government of Australia. The lecture was the first event of the CGIAR Annual General Meeting. A new publication "Agriculture and the Environment—Partnership for a Sustainable Future" was released at the lecture.

For more information, click on **www.gefweb.org** or **www.cgiar.org**

NEW GLOBAL PARTNERSHIP TO IMPROVE CASSAVA PRODUCTION

Little-known Root Crop Feeds 600 Million in the Tropics

Thirty of the world's leading cassava researchers established a "Global Partnership for Cassava Genetic Improvement," a new partnership to promote and coordinate global investment in the genetic improvement of cassava, an important source of nutrition in tropical countries.

"This new partnership is a very positive development," said Louise Fresco, Assistant Director General, FAO. "It reflects the urgent need to support the genetic improvement of cassava to help millions of the world's hungriest people."

IITA

Cassava *(Manihot esculenta Crantz)*, is a perennial woody shrub with an edible root. It is the third most important source of calories, after rice and corn, among more than 600 million people in Africa, Asia and Latin America. Cassava is grown by poor farmers, many of them women, often on marginal lands. For these people, the crop is vital for food and nutrition security and income generation.

Despite the importance of cassava, investments in research have lagged behind other food crops. Consequently, cassava productivity over the past 30 years has grown at a meager 1 percent annually, in contrast to 2-5 percent growth rates in corn, rice and wheat. In Africa, average cassava yield is 8 tonnes per hectare compared to potential yields of over 80 tonnes per hectare. Bacterial and viral diseases, insect pests, weeds, and drought have all combined to limit cassava production. Attempts by farmers to market their cassava products have also fallen well short of their potential, because of rapid post-harvest deterioration and inadequate starch and protein content in the roots.

Conventional breeding efforts have attempted to address many of the constraints facing cassava productivity, but with limited success. Progress has been slow, because of the crop's complex genetic makeup, which makes it difficult to breed efficiently.

"Cassava is the most reliable source of food for subsistence farmers in Africa, Asia, and Latin America," says Alfred Dixon, cassava breeder at IITA. "But it is also an important industrial and cash crop that can promote rural development."

New tools such as advanced molecular biology and biotechnology offer new approaches to cassava improvement and have the potential to make cassava much more productive, nutritious, and profitable to grow.

"The new partnership will develop and use advanced technologies such as genomics to create cassava planting materials that incorporate desired traits," said Eric Kueneman, Chief, Crop and Grassland Service, FAO. "These include enhanced resistance to pests and disease, modified starch quality for better marketability and enhanced levels of protein and micronutrients that will make the crop more nutritious."

The Global Partnership for Cassava Genetic Improvement was conceived at a meeting of 30 of the world's leading experts in cassava research held at the Rockefeller Foundation Conference Center in Italy in early October. It is balanced by representation from leading research organizations in developing countries and advanced research institutions in industrialized countries.

For more information, click on **www.cgiar.org**

WORLD BANK LAUNCHES STRATEGY "REACHING THE RURAL POOR"

The World Bank's Board of Executive Directors have endorsed a new rural development strategy, "Reaching the Rural Poor" which seeks to increase lending for agriculture by 20 percent yearly, marking a net increase of about $400 million.

"The new Agriculture and Rural development strategy will contribute to the implementation of the outcomes of the Johannesburg World Summit on Sustainable Development in which more than 100 world leaders committed to make rural development a priority for action," says Ian Johnson, CGIAR Chairman and World Bank Vice President for Environmentally and Socially Sustainable Development.

Agricultural and rural growth are essential to income growth in most low income countries where agricultural output amounts to 24 percent of total GDP.

"Unless there is fast and broad-based rural development, we will not be able to achieve the Millennium Development Goals, including halving the proportion of people suffering from hunger," says Kevin Cleaver, Director of the World Bank's Rural Development Department and Co-sponsor representative to the CGIAR. "Since 75 percent of world's poor live in rural areas, the battle against poverty will in large measure be fought and won there."

The new strategy rests on four pillars: a focus on poor people, addressing both farm and non-farm activities, building alliances with stakeholders, and addressing the impact of trade policies, subsidies, and climate change.

Agriculture in developing countries must grow by at least 3.5 percent annually on average, up from 2-2.5 percent in the 1990-2000 period, in order to contribute to achieving the goal of halving poverty and hunger by 2015. But the new strategy recognizes that growth is not enough: a major reason for the inability of developing countries to capture a larger share of agricultural trade is that protection, especially in the large OECD markets, has remained very high. The potential economic welfare benefits of global agricultural trade reform for the developing world are estimated to be at least $142 billion annually.

While reconfirming that agriculture is the main source of overall economic growth and poverty reduction in many poor countries, the strategy emphasizes that developed countries need to make progress in agricultural trade liberalization, reduce trade-distorting agricultural subsidies, make scientific progress in agriculture accessible to developing countries, and refocus assistance to rural development. This is especially pertinent in Sub-Saharan Africa and South Asia where the majority of rural poverty is found.

For more information, click on **www.worldbank.org/ruraldevelopment**

ICLARM AND ICRAF DON NEW LOOK, NEW LOGOS

Two Centers—ICLARM and ICRAF—have adopted new names and new corporate logos. Concerned that their acronyms were not resonating with key stakeholders, the Penang-based International Center for Living Aquatic Resources Management (ICLARM) is WorldFish Center, with a tag line "People-Science-Environment-Partners."

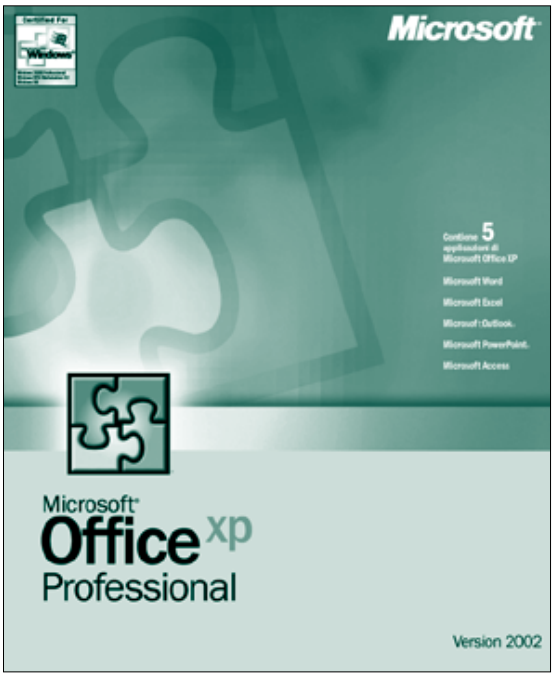
The Nairobi-based International Centre for Research in Agroforestry (ICRAF) has become the World Agroforestry Centre, with a tagline "Transforming Lives and Landscapes."

WorldFish CENTER
PEOPLE · SCIENCE · ENVIRONMENT · PARTNERS

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

NEW SOFTWARE LICENSING AGREEMENT WITH MICROSOFT

For a knowledge-intensive organization such as the CGIAR, software is key to creating, sustaining and disseminating scientific innovations and information geared to the needs of poor farmers. In a significant development, a newly-concluded CGIAR-Microsoft software licensing agreement will enable Future Harvest Centers to benefit from steeply discounted prices for Microsoft software products, including the capability to make online purchases.



"By acting as a system, we can reap the rewards of increased efficiency, reduced operating costs, and value-added services," said Frank Rijsberman, Director General, IWMI and chairman, of the Information and Communication Technology-Knowledge Management (ICT-KM) subcommittee of the CGIAR Center Directors Committee. "Cost-effectiveness must be our guiding mantra."

Microsoft is the standard software used throughout the CGIAR, with over 5,000 copies currently installed. The new agreement allows the Centers to purchase software individually as and when needed it, but benefit from Microsoft's 'charity-pricing' specifically tailored for academic, not-for-profit organizations.

"The CGIAR ICT-KM program is guided by a 'one system' philosophy" says Enrica Porcari, newly-appointed CGIAR Chief Information Officer based at the WorldFish Center in Penang, Malaysia. "The agreement with Microsoft is an important first step that demonstrates the value of innovative approaches to software procurement with systemwide benefits."

The CGIAR ICT-KM program was established in October 2000 to identify, champion and coordinate areas of collaboration between Future Harvest centers and information domains for greater systemwide value. Under the new agreement, Centers can expect to pay about a third of the best price offered in Africa for a flagship product such as Microsoft Office Professional. Charity pricing is the lowest pricing category available from Microsoft.

Announcements

Adel El-Beltagy, Director General, ICARDA is the new Chairman of the CGIAR Center Directors Committee (CDC). He succeeds Meryl J. Williams, Director General, WorldFish Center.

Jacques Paul Eckebil, Assistant Director-General, Sustainable Development Department, FAO retired on October 31, 2002.

Mohammad Roozitalab, Chairman, AARINENA has been appointed Chairman of the Global Forum on Agricultural Research (GFAR). He succeeds Raj S. Paroda.

Olanrewaju Babatunde Smith has been appointed Executive Secretary of GFAR. He joins GFAR from the International Development Research Centre (IRDC) in Canada, and succeeds Fernando Chaparro who left GFAR in February 2002.

ICLARM has a new name: WorldFish Center (www.worldfishcenter.org). So does ICRAF: World Agroforestry Centre (www.worldagroforestrycentre.org)

In Memoriam

David R. Mackenzie, Chairman of the Board of Trustees, International Potato Center (CIP), passed away on October 23, 2002. He served six years on CIP's Board and was its Chairman since 1998.

Harold N. Graves, Jr. passed away on November 13, 2002. He served as Executive Secretary, CGIAR, from 1972-1975.

CGIAR

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Ian Johnson

CGIAR Director
Francisco Reifschneider

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CGIAR-SUPPORTED FUTURE HARVEST CENTERS

- **Centro Internacional de Agricultura Tropical (CIAT)**
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  Phone: (57-2) 4450000
  www.ciat.cgiar.org

- **Center for International Forestry Research (CIFOR)**
  Bogor, Indonesia
  Phone: (62-251) 622 622
  www.cifor.cgiar.org

- **International Maize and Wheat Improvement Center (CIMMYT)**
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  Phone: (52-5) 804 2004
  www.cimmyt.org

- **Centro Internacional de la Papa (CIP)**
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  Phone: (51-1) 349-6017
  www.cipotato.org

- **International Center for Agricultural Research In the Dry Areas (ICARDA)**
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  Phone: (963-21) 2213433
  www.icarda.org

- **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)**
  Patancheru, Andhra Pradesh, India
  Phone: (91-40) 3296161
  www.icrisat.org

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  Washington, DC, United States
  Phone: (1-202) 862-5600
  www.ifpri.org

- **International Institute of Tropical Agriculture (IITA)**
  Ibadan, Nigeria
  Phone: (234-2) 2412626
  www.iita.org

- **International Livestock Research Institute (ILRI)**
  Nairobi, Kenya
  Phone: (254-2) 630743
  www.cgiar.org/ilri

- **International Plant Genetic Resources Institute (IPGRI)**
  Maccarese (Fiumicino) Rome
  Phone: (39-06) 61181
  www.ipgri.org

- **International Rice Research Institute (IRRI)**
  Los Baños, Philippines
  Phone: (63-2) 8450563
  www.irri.org

- **International Service for National Agricultural Research (ISNAR)**
  The Hague, The Netherlands
  Phone: (31-70) 3496100
  www.isnar.cgiar.org

- **International Water Management Institute (IWMI)**
  Colombo, Sri Lanka
  Phone: (94-1) 867404
  www.cgiar.org/iwmi

- **West Africa Rice Development Association (WARDA)**
  Bouaké, Côte d'Ivoire
  Phone: (225) 31634514
  www.warda.org

- **World Agroforestry Centre**
  Nairobi, Kenya
  Phone: (254-2) 524000
  www.worldagroforestrycentre.org

- **WorldFish Center (ICLARM)**
  Penang, Malaysia
  Phone: (60-4) 626-1606
  www.worldfishcenter.org

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