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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH ■ JULY 2001

SOUTH AFRICA HOSTS MID-TERM MEETING 2001: CGIAR CHARTS NEW DIRECTIONS IN DURBAN

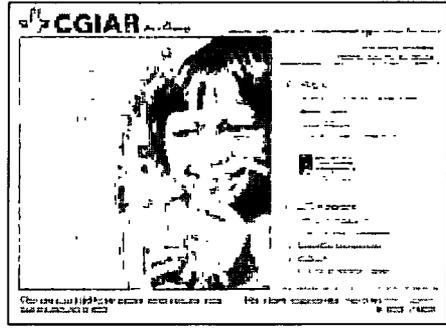
The Government of South Africa hosted CGIAR's Mid-Term Meeting May 21–25, 2001, in the picturesque coastal city of Durban in the province of KwaZulu-Natal. Recognizing the links between agricultural research and key issues on the national and international development agenda, the South African Cabinet declared May 21–25 Agricultural Research Week.

Durban was a fitting locale for discussion of the CGIAR's reform agenda. Agriculture is a lifeline of the South

African economy, contributing about 5 percent of GDP. Agriculture's impact is much larger as it directly provides nearly 11 percent of the country's jobs and creates employment for another 16 percent of the workforce in related sectors. And since agro-industries contribute 37 percent to the GDP, agricultural development is a central element of national aspirations, and it is the first of seven "presidential imperative programs" envisioned by President Thabo Mbeki.

Continued on page 6

CGIAR WEBSITE SPORTS A NEW LOOK AND CONTENT



The CGIAR's website is growing in popularity as a one-stop source for crisp, concise, and timely information. Since January 2001, the site has received more than 7 million visitors, and during June 2001 alone, the site received a record half a million visitors. To browse the new website, please type **www.cgiar.org** in your browser bar.

IFPRI'S 2020 VISION CONFERENCE: SUSTAINABLE FOOD SECURITY FOR ALL

IFPRI, in collaboration with the German Federal Ministry for Economic Cooperation and Development (BMZ) and others, is hosting a major conference—Sustainable Food Security for All—in Bonn, Germany, September 4–6, 2001. The conference features an impressive array of speakers, including H. E. Johannes Rau, President of the Federal Republic of Germany, and H.E. Heidemarie Wiczorek-Zeul, Federal Minister for Economic Cooperation and Development. CGIAR Chairman Ian Johnson will also participate.

Widespread food insecurity affects 800 million people. Why does hunger persist? Which forces will influence the prospects for food security in the next two decades? Have we set the right priorities and who is responsible for action? These questions form the core motivation behind the conference organized by IFPRI's 2020 Vision Initiative with cosponsors from the public and private sectors, and civil society. For more details, click on **www.ifpri.org**



Appreciation
The CGIAR acknowledges with gratitude the support and gracious hospitality extended by the Government of South Africa, through its Ministry of Agriculture and Land Affairs, and the National Department of Agriculture which led to the successful hosting of the CGIAR's Mid-Term Meeting

BIOTECHNOLOGY & SUSTAINABLE DEVELOPMENT: VOICES OF THE SOUTH & THE NORTH

A major conference on biotechnology and sustainable development is scheduled for October 15-17, 2001 at the Bibliotheca Alexandrina, the Library of Alexandria, Egypt. Ismail Serageldin, former CGIAR Chairman and newly-appointed Librarian of Alexandria chairs the program committee. In addition to the CGIAR and ICARDA, other major partners and co-sponsors include the Paris-based United Nations Educational, Scientific and Cultural Organization (UNESCO), Organization for Economic Cooperation and Development (OECD), and the Third World Academy of Sciences (TWAS), Trieste, Italy. Featured speakers include two Nobel Laureates, top scientists and decision-makers, and civil society representatives (more details including the program available by clicking on www.egyptbiotech2001.com). 🌱

BANGLADESH EMERGES AS A LEADING GROWER OF NUTRITIOUS LENTILS

Lentils, a leading source of protein, iron, and vitamin B, are an increasingly popular crop in Bangladesh, with more than 40,000 hectares—about 25 percent of the area on which lentils are grown in Bangladesh—planted to Barimasur lentils. These plant varieties, derived from Middle Eastern lentils provided by ICARDA, have natural resistance to disease, and their larger seed size makes them attractive to consumers. Farmers growing the Barimasur lentils have helped add nearly \$7 million to Bangladesh's rural farm economy.

"Lentils are a critical part of Bangladesh's food supply," says Adel El-Beltagy, Director General, ICARDA. "They're not only affordable, nutritious, and easy to cook but also easily digestible, a characteristic that is extremely important for young children.

Barimasur lentils produce yields as much as 40 percent higher than

Bangladesh's traditional varieties, generate stable yields, and carry broad-based disease resistance, characteristics that have prompted thousands of farmers to switch from growing traditional varieties. A massive farmer education campaign has been launched, and over the next five years, Barimasur lentils are expected to spread rapidly to all corners of Bangladesh. The release of similarly bred varieties in India, the world's largest lentil producer, is also expected.

Lentils have been around for at least 8,000 years and were known to the ancient Egyptians, who placed them in the tombs of their pharaohs. The varieties grown in Bangladesh were first brought to the South Asia region around 1000 BC by Arab tribes migrating from the Middle East.

For full story, see

www.futureharvest.org 🌱

WARDA'S WORK ON NEW RICE FOR AFRICA (NERICA) ENDORSED BY ROCKEFELLER FOUNDATION PRESIDENT

WARDA's successful efforts to breed a New Rice for Africa (NERICA) has won praise from one of the world's leading scientists, Gordon Conway, President of the Rockefeller Foundation.

After visiting farmers' fields in Côte d'Ivoire, Conway said, "NERICA rice varieties represent genuine new potential for resource-poor farmers throughout sub-Saharan Africa and should be disseminated widely throughout the continent."

In cooperation with its partners,

WARDA has launched the NERICA Consortium for Food Security in Sub-Saharan Africa. The new consortium brings together a broad range of institutions and stakeholders, including leading national agricultural research systems, civil society groups, and farmer organizations in West and Central Africa, as well as leading donors such as UNDP, Japan, the World Bank, the African Development Bank, the Rockefeller Foundation, USAID, and Sasakawa 2000.

WARDA's success is a good example

of South-South cooperation. African and Asian research partners collaborated to produce the new rice, which is substantially richer in protein, more tolerant to drought, and more resistant to disease than other rice varieties. NERICA produces 50 percent more grain and matures 30 to 50 days earlier than other rice varieties.

Rice is a major staple food in sub-Saharan Africa. African countries spend an estimated \$1 billion in scarce foreign reserves to import 4 million tons of rice annually. 🌱



SOUTH AFRICA DAY

South Africa Day got off to a rousing start with participants visiting Cedara Agricultural Centre, near Pietermaritzburg. The inaugural program featured a stellar cast of speakers: King Zwelithini of the Zulus; Thoko Didiza, South African Minister of Agriculture and Land Affairs; Narend Singh, member of the Executive Committee for Agriculture and Environmental Affairs in KwaZulu-Natal; Bongiwe Njobe, Director General of the South African Agricultural Research System; CGIAR Chairman Ian Johnson; and others.

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SOUTH AFRICA-CGIAR PARTNERSHIP YIELDS NEW MAIZE VARIETIES

A highlight of South Africa Day was CIMMYT's announcement of the release of two new maize varieties—Grace and ZM521—that have 30–50 percent higher yields than traditional varieties grown by smallholder farmers in South Africa's drought-prone, nutrient-depleted soils.

“Higher maize yields mean more food and income for poor farmers,” says CGIAR Chairman and World Bank Vice President Ian Johnson. “The hardier maize plants will help prevent agricultural expansion in already-stressed fragile ecosystems.”

The two varieties have characteristics that are specifically valued by smallholder farmers. First, they act as a hedge against hunger. Grace matures earlier than traditional maize varieties and can be eaten as green maize. The new open-pollinated maize varieties can have a significant effect on poverty because their seed is cheaper than commercially available hybrids.

“We are very proud of the results of our collaborative research,” says Timothy Reeves, Director General of CIMMYT. “The products are the result of a farmer- and South African-led development strategy that is helping to make a positive impact in the lives of thousands of poor farmers who have been bypassed by modern technology.”

“For a resource-poor farmer who plants only two hectares of maize, use of the new varieties would add more than half a ton to household grain stores each year,” says Marianne Bänziger, a CIMMYT maize physiologist based in Zimbabwe. “That is a significant contribution to food security in isolated areas, where one failed har-



CIMMYT's new maize varieties are valued by women farmers in Zimbabwe.

vest means hunger.” Bänziger's work on stress-tolerant maize won her the CGIAR's Promising Young Scientist Award in 1998.

Maize is the dominant staple food in southern Africa. Per capita consumption in the region surpasses 100 kilograms. CIMMYT collaborated extensively with South African partners to develop the new maize varieties. 🌽



CLIMATE CHANGE POSES

Scientific evidence about global warming increasingly suggests that the steady warming of the earth's surface temperature has enormous implications for agriculture and the well-being of poor farmers all over the developing world. This was the main message of the CGIAR annual report for 2000, *The Challenge of Climate Change: Small Farmers at Risk*, released at a press conference held in Durban, May 23, 2001.

"The IPCC has warned that the latest scientific evidence points strongly toward a steadily warming world in the 21st century," said Dr. Robert T. Watson, Chairman of the United Nations Intergovernmental Panel on Climate Change (IPCC) and World Bank chief scientist. In launching the report, he stated that "The question is no longer whether the earth's climate will change, but rather how much it will change, how fast, and where."

The effects of climate change on agriculture can be profound, touching nearly all aspects of the agricultural enterprise. Recent findings from the IPCC indicate that the earth's average surface temperature could rise by 1.4–5.8 degrees Celsius (2.5–10.4 degrees Fahrenheit) over the next 100 years. Such an increase is more than 60 percent higher than predictions scientists made just five years ago. It would represent the most rapid climate change in 10,000 years.

"A warmer world will surely impact the yields of staple crops, increase the incidence of pests, and exacerbate drought – all with profound effects on the well-being of small farmers in developing countries," said CGIAR Chairman Ian Johnson at the press conference. "As an international public research organization, the CGIAR's challenge is to mobilize the best of science for poor farmers at risk."

"CGIAR scientists are developing a coherent, systemic response to the potential effects of climate change on agriculture," said Pedro Sanchez, Director General of ICRAF and leader of the CGIAR's Inter-Center Working Group on Climate Change. "Our research must help poor farmers adapt to the consequences of climate change and mitigate its deleterious effects."

Some examples of CGIAR research already underway:

- CGIAR scientists are working to reduce tillage in rice-wheat rotations in the Indo-Gangetic Plains, the most intensely cropped agricultural land in the world. This work will help reduce large amounts of carbon emissions (by cutting tractor use). This innovative effort involves CIMMYT, CIP, ICRISAT, IRRI, and IWMI.

Speakers at the press conference launching CGIAR Annual Report "The Challenge of Climate Change: Poor Farmers at Risk." Seated (from L to R) Bongiwe Njobe, Director General, National Department of Agriculture, South Africa; Ian Johnson, CGIAR Chairman; Robert Watson, Chairman, Inter-Governmental Panel on Climate Change and Chief Scientist, The World Bank; and Pedro Sanchez, Director General, ICRAF



Photo Chas Geer



RISKS TO POOR FARMERS

- Agroforestry—planting trees on farms—has the highest potential to soak up atmospheric carbon, at rates of approximately three tons per hectare per year. CGIAR scientists are converting degraded croplands and grasslands into agroforestry systems that are estimated to save 390 million metric tons of carbon from being emitted into the atmosphere per year by the year 2010. This effort is led by ICRAF.
- MarkSim, a computer model developed at CIAT and ILRI, can simulate weather data and predict day-by-day rainfall and temperature information for any point in Africa, Asia, and Latin America. The information obtained from MarkSim will help poor farmers accurately predict yields of staple food crops.
- Climate change specialists have long agreed that forestry and land-use changes in the tropics are, on balance, large sources of greenhouse gas emissions. CIFOR has been working on the management and use of forests to sequester carbon or reduce emissions of greenhouse gases to the atmosphere. This research also examines the opportunities and risks to local communities, a major concern of governments and environmental groups. Preliminary results of this work have been presented as policy briefs that help to inform and guide public policymakers about the need to increase economic opportunities for local communities and protect livelihoods of people in project areas.

“Through our partnership with CGIAR scientists, we are laying a solid foundation for improving our strategies to anticipate, mitigate, and cope with climate change,”

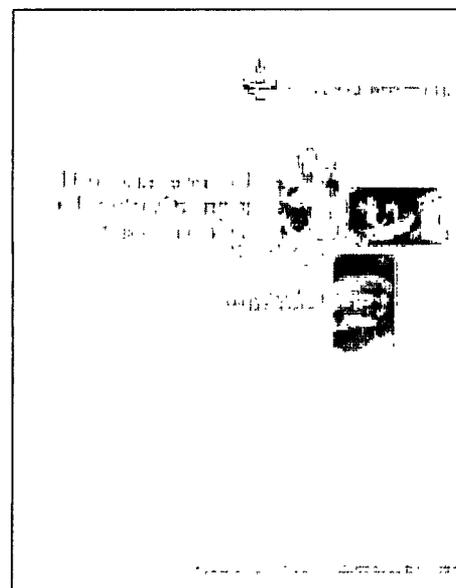
— Bongiwe Njobe

Agriculture is the economic mainstay in most African countries, contributing about 35 percent of GNP, 40 percent of exports, and 70 percent of employment. About 70 percent of Africa's poor live in rural areas. According to the IPCC, the main challenges facing Africans will emanate from tropical storms, floods, droughts, landslides, abnormal sea-level rises, and other extreme weather expected to result from climate change. These events will increase problems of pollution, sanitation, waste disposal, water supply, public health, infrastructure, and production technologies.

“Through our partnership with CGIAR scientists, we are laying a solid foundation for improving our strategies to anticipate, mitigate, and cope with climate change,” said Bongiwe Njobe, Director General of the South African National Department of Agriculture.

Global climate change is inexorably linked to the CGIAR's goals of food security, poverty reduction, and environmental protection. By focusing its annual report on this important topic, the CGIAR is helping to bring the drivers of global climate change into the agricultural research and capacity-building agenda for the ultimate benefit of developing countries.

The Challenge of Climate Change: Small Farmers at Risk is available at the CGIAR website, www.cgiar.org. 



NEW DIRECTIONS IN DURBAN *Continued from page 1*

In Durban, CGIAR members and stakeholders took strong actions to reinvigorate the system and to strengthen its potential to make a difference in the fight against hunger, poverty, and environmental degradation.

In brief, the CGIAR decided to establish new "challenge programs" that respond directly to major concerns on the global development agenda. In addition, it decided to limit meetings of the CGIAR to once a year and conduct business through a small executive council between annual meetings; to transform the CGIAR Technical Advisory Committee (TAC) into a science council consisting of a few, high-level science policy strategists; and to establish a CGIAR system office to facilitate coherence and cost-effectiveness in system management.

To accelerate implementation of these actions, four Task Forces have been established together with a dedicated web site and listservs to facilitate communication.

- Challenge programs will elevate the significance of CGIAR-supported research by aligning it more closely with international development goals and opening up the CGIAR to broader research partnerships. Over time, these programs will induce structural change among the international centers. (Task Force Co-Chairs: Eliseo Ponce, Philippines, and Klaas Tamminga, Netherlands).
- The work of the executive council, based on "new age" modes, will lead to clarity, focus, and speed in decision-making. An interim executive council was formed and held its first meeting on May 25, 2001. In line with the recommendations, International Centers Week will henceforth be called the Annual General Meeting (AGM). The first AGM is scheduled

for October 29–November 2, 2001, in Washington, DC. (Task Force Co-Chairs: Emmy Simmons, USA, and Gilles Saint-Martin, France).

- The science council will ensure that the science practiced by the Centers continues to meet the highest international standards for quality and relevance and is consistent with development priorities. (Task Force Co-Chairs: Lauritz Holm-Nielsen, Denmark, and Joseph Mukiibi, Uganda).

**"Agriculture and its
sustaining force,
agricultural research, are
at the heart of any
realistic effort to build
the components of
sustainable development"**

— Thoko Didiza

- The system office will bring cohesion through an integrated communication, public awareness and fundraising strategy. It will help the Centers to work better as a system and attract new donors. (Task Force Co-Chairs: Hans-Jochen de Haas, Germany, and Meryl J. Williams, Australia).

CGIAR Chairman Ian Johnson emphasized that the reform program will help ensure CGIAR science is closely linked with the international development agenda. "Next year, South Africa will be hosting the Johannesburg Earth

Summit, and discussions such as the ones held in Durban will help to restore the importance of agriculture to its rightful place in public policy debate, both at the summit and beyond."

The meeting was a landmark event in other ways as well. South Africa Day and Sub-Saharan Africa Agricultural Research Day dominated the proceedings. They were attended by nearly 500 of the world's top agricultural scientists, policy makers, and civil society representatives.

"Agriculture and its sustaining force, agricultural research, are at the heart of any realistic effort to build the components of sustainable development," said Thoko Didiza, the South African Minister of Agriculture and Land Affairs. "We are delighted to host the CGIAR meeting because we want to strengthen our partnership with some of the best minds working in agricultural research."

In addition to discussing traditional topics such as challenges in improving crop productivity, natural resource management, and soil fertility, CGIAR members focused attention on some of the most serious issues facing Africa: from the risks posed by climate change, to the costs and cures of foot-and-mouth disease, to the impact of the HIV/AIDS pandemic that is threatening agricultural production in some of the poorest parts of sub-Saharan Africa.

"Despite progress, the development agenda continues to grow. We must confront environmental threats, including climate change, water scarcity, land degradation, loss of biodiversity, and HIV/AIDS," said Johnson. "Agriculture alone cannot solve these problems, but it can make a big dent in reducing poverty and hunger and promoting growth. The CGIAR meeting in South Africa was critical for charting the way forward." 🌾



LINKING RESEARCH TO PEOPLE CGIAR CHAIRMAN VISITS ICRISAT AND FINDS “A RECIPE FOR SUCCESS”

Most people know of peanut butter, one of America's favorite foods. But few have heard of tigadege, a peanut paste that has for centuries been the most popular ingredient for making sauce in Niger and Mali in West Africa. Few also know that groundnuts, or peanuts as they are called in North America, are largely grown by smallholder farmers in the semi-arid tropics (SAT).

Such interesting facts greeted Ian Johnson, CGIAR Chairman and World Bank Vice President for Environmentally and Socially Sustainable Development, when he visited the Patancheru headquarters of ICRISAT in February 2001.

Groundnut is one of five ICRISAT mandate crops. Concern over aflatoxin (a toxin produced by a mold) in groundnut has been growing. Aflatoxin in food and feed has been found to cause liver cancer and is a big health risk to both human beings and animals.

“A collaborative project led by ICRISAT led to the development of very cheap kits that can be used by our national partners and health officials to detect aflatoxins,” says William D. Dar, ICRISAT Director General. Dr. Dar noted that such successes are possible because ICRISAT takes its corporate motto—science with a human face—seriously. “In consultation with our partners, we have formulated a work plan with a clear idea of how our research effort will deliver real benefits to the most disadvantaged people in the SAT.”

Johnson also saw ICRISAT's partnership in action when he visited the Central Research Institute for Dryland Agriculture (CRIDA), a leading national



CGIAR Chairman Johnson visits “SatVenture” – a display for visitors showcasing rural semi-arid tropics and how ICRISAT's research is making a difference in the lives of the region's farmers

program of the Indian Council of Agricultural Research and a community-managed watershed in a nearby village. He was briefed about the joint ICRISAT-ILRI project on improving the nutritional quality of SAT crop residues for ruminants.

“The impact has been spectacular,” said Dr. Dar. “Over 400 improved varieties of ICRISAT mandate crops have been released around the world, yielding over US\$ 200 million in benefits to poor farmers across the entire SAT region.”

During the visit, Mr. Johnson also paid a courtesy visit to Mr. N. Chandrababu Naidu, the dynamic Chief Minister of Andhra Pradesh state, which hosts ICRISAT. Mr. Naidu expressed his appreciation for ICRISAT's

support when the groundnut crop covering nearly 300,000 hectares—the largest groundnut growing belt in the world—was devastated by a deadly disease last year. ICRISAT researchers made a quick breakthrough by identifying the attack as an outbreak of peanut stem necrosis disease caused by a new virus—and not peanut bud necrosis, as was previously thought. This diagnosis helped speed mitigation efforts.

“I was really impressed by the quality of science and the degree of ownership that the state government has exhibited toward ICRISAT,” said Johnson in concluding remarks. “I think that the ICRISAT partnership is a very promising way of building the kind of alliances that the CGIAR has to continue to develop as we move into the future.”



SYMPOSIUM FOCUSES ON AGRICULTURAL DEVELOPMENT IN SUB-SAHARAN AFRICA

“Agriculture must be put back on the development map,” said Ian Johnson, CGIAR Chairman and World Bank Vice President for Environmentally and Socially Sustainable Development, in inaugural remarks at the Sub-Saharan Africa Agricultural Research Day conference. “We have to do that at the World Bank, the United Nations, and the CGIAR and in governments, the private sector, and civil society. Agriculture’s importance must pervade all discussions we have on sustainability and sustainable development,” he added.

The conference, a major highlight of Agricultural Research Week, was hosted by the Republic of South Africa. The conference’s overarching purpose was to explore ways of jump-starting growth and development in SSA—a global strategic priority. A majority of the participants were African. They represented a diverse range of viewpoints: the public and private sectors, national research programs, regional organizations, and civil society.

Agriculture and agricultural research must serve as the engine of growth in sub-Saharan Africa. About 70 percent of Africa’s poor live in rural areas, and rural populations will continue to outnumber urban populations for nearly three decades to come. Agriculture accounts for about 35 percent of the region’s GNP, 40 percent of exports, and 70 percent of employment.

“Farmers need technology,” said Mandivamba Rukuni, Chairman of Zimbabwe’s Agricultural Research Council and program director of the W.K. Kellogg Foundation. “Africa’s overall development strategy should be

“ The way forward is to build on the gains already made . . . It is only through partnerships that we can hope to make a major impact on the agricultural development challenges facing Africa.”

— Joseph Mukiibi

based on an ABCD approach—Asset-Based Community Development—in which the operative words are assets and community.” Rukuni’s paper “Challenges and Opportunities for Sub-Saharan Africa” made a seminal contribution to the conference.

A major outcome of the conference was “The Durban Statement—Way Forward for Agricultural Research and Development in Sub-Saharan Africa” (see box on pages 9 & 10). The statement, a road map that represents the collective vision and aspirations of African leaders, was signed by all major regional organizations and the CGIAR-supported Future Harvest Centers.

“We have identified several elements—Forum for Agricultural Re-

search in Africa (FARA)’s vision for African agricultural research and the CGIAR strategy for Sub-Saharan Africa as well as the four pillars of germplasm and natural resource management, technology dissemination, policy research, and capacity building—that are absolutely essential to support a strategic action plan,” said Kanayo Nwanze, Chairman of the Center Directors Committee on Sub-Saharan Africa and Director General of WARDA. “Strengthened, inclusive partnerships are the way forward.”

CGIAR has been a strong partner in the overall agricultural development effort in sub-Saharan Africa. Four Centers (ICRAF, IITA, ILRI, and WARDA) are headquartered in the region, and most Centers have research programs underway in the region.

Other speakers included Guido Gryseels of CGIAR’s Technical Advisory Committee; Bongive Njobe of the South African National Department of Agriculture; Geoffrey Mrema of Association for Agricultural Research in East and Central Africa (ASARECA); Keoagile Molapong of Southern African Centre for Cooperation in Agricultural Research and Training (SAC-CAR); Ndiaga Mbaye of Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles (CORAF/WE CARD); and Per Ryden of Global Mechanism, United Nations Convention to Combat Desertification (UNCCD).

“The way forward is to build on the gains already made,” said Joseph Mukiibi, Director General of the Ugandan National Agricultural Research Organization (NARO) and Chairman

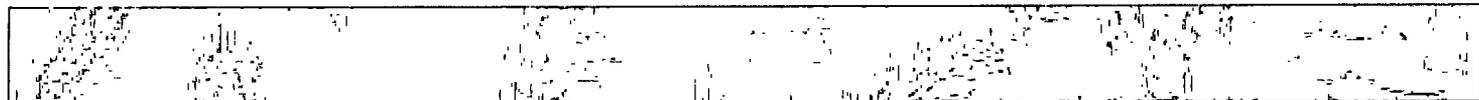


Photo Chas Geer

Speakers at the press conference launching "The Durban Statement." Seated (from L to R) Njabulo Nduli and Bongiwe Njobe of the South African National Department of Agriculture; Joseph Mukiibi, National Agricultural Research Organization, Uganda; and Hans Binswanger, The World Bank

of FARA. "Agriculture must receive due place on the agenda of the Johannesburg Earth Summit next year. It is only through partnerships that we can hope to make a major impact on the agricultural development challenges facing Africa."

At the concluding session, Hans Binswanger, the World Bank Sector Director for Environment, Rural and Social Development in the Africa region, made an impassioned plea for urgently addressing the special challenges posed by HIV/AIDS in sub-Saharan Africa. The pandemic has the potential to severely curtail agricultural growth, hobble whole economies, and reverse hard-won gains.

The meeting ended with a vote of thanks to Moctar Touré, outgoing Executive Secretary of Special Program for African Agricultural Research (SPAAR), and Manuel Lantin, CGIAR Science Advisor.

EXCERPTS FROM THE DURBAN STATEMENT

The Way Forward for Agricultural Research and Development in Sub-Saharan Africa

- 1 Agriculture is the engine for improved rural livelihoods and economic development in sub-Saharan Africa (SSA). Recognizing this, African political leaders have positioned agriculture at the center of their new vision for the future of the continent.
- 2 The African vision envisages that by 2020, the region should have dynamic agricultural markets, be a net exporter of agricultural products, have food available at affordable prices, develop a culture of sustainable use of natural resources, and position itself as a strategic player in agricultural science and technology development.
- 3 The target growth rate of 6 percent per annum cannot be achieved without a focused and market-driven technology development and transfer system, an enabling policy environment, and effective institutions.
- 4 The considerable efforts and financial investments that have been made by national and international institutions over the past 30 years have had limited payoff. At present, SSA is dealing with first-order challenges of increasing agricultural productivity, and newer challenges—urbanization, globalization, lack of market competitiveness, resource degradation, and HIV/AIDS—are threatening the potential of agriculture to contribute to sustainable economic development.

Continued on page 10.



DURBAN STATEMENT EXCERPTS

Continued from page 9

5 To address these challenges, we, the members of the SSA agricultural research and development community, recognize that effective and broadened partnerships are essential. The national agricultural research systems (NARS) must play a central role in these partnerships. African countries have made considerable efforts over the past decades to develop a solid research infrastructure. They have strengthened regional collaboration through the formation and development of sub-regional organizations (SROs) and, more recently, through the creation of the Forum for Agricultural Research in Africa (FARA). Other partners, including the CGIAR-supported Future Harvest Centers, have similarly responded to the challenge through more intensive consultation with NARS and greater collaboration among themselves.

6 The way forward is to build on gains already made. We agree to pursue the stated vision by developing and disseminating technologies for increased agricultural productivity and sound natural resource management, utilizing the benefits offered by emerging technologies (information and communication technology and safe use of biotechnology); adopting the principle of inclusive partnerships; and using trained human resources, increased and sustained financing, and effective institutions.

7. On the occasion of the CGIAR Mid-term Meeting held in Durban, South Africa, we call on SSA governments to translate political commitment to agricultural development into concrete actions by providing resources, creating an enabling policy and institutional environment, and ensuring that sustainable agriculture is on the agenda of the Johannesburg Earth Summit. FARA and the Global Forum on Agricultural Research must play an advocacy role for placing agricultural research at the center of the SSA development agenda, and the international investor community must coordinate its efforts and significantly increase financial support for African agricultural research. The CGIAR, advanced research institutions, and other components of the international agricultural research system should forge effective partnerships with African NARS and achieve greater programmatic integration. Finally, changes underway in the CGIAR should reinforce efforts to achieve the African vision.

- Forum for Agricultural Research in Africa (FARA)
- Special Program for African Agricultural Research (SPAAR)
- Association for Agricultural Research in East and Central Africa (ASARECA)
- Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles (CORAF/WE CARD)
- Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR)
- Future Harvest Centers supported by the CGIAR

Durban, South Africa—May 22, 2001

The complete Durban Statement is available at www.cgiar.org. 

CGIAR INTERNAL AUDITORS MEET

The first CGIAR seminar for internal auditors and finance staff, "Internal Auditing Practices and Concepts for the 21st Century," was held at the Institute of Internal Auditors Inc. (IIA) in May in Florida. Internal auditors and finance staff from 14 Centers participated.

The seminar's objectives were to introduce new internal auditing concepts and tools to increase efficiency and accountability in the CGIAR, discuss common issues and knowledge for a better understanding of internal auditing practices, and foster a network of CGIAR internal auditors to share best practices.

"As publicly funded institutions, CGIAR-supported Centers are unambiguously committed to ensuring the highest levels of integrity in financial processes," said Hock-Chye Ong, Director, CGIAR Internal Audit, who is based at IRRI. "By their work, internal auditors can help ensure that these standards are consistently met."

A major highlight of the seminar was an inspirational speech by J. Graham Joscelyne, Auditor General of the World Bank Group. Louis Wong, a former General Auditor of the Asian Development Bank spoke on the "Economic Impact of Corruption and the Anti-Corruption Strategy and Experience of the Asian Development Bank".

Participants explored new internal auditing standards, internal control models, risk management, internal auditing services, audit and technology tools, and interactions between the audit committees and management. Participants are considering joining IIA's Global Auditing Information Network (GAIN), of which ICARDA is already a member. 



FOUR NEW CENTER DIRECTORS APPOINTED

The Boards of Trustees of four Centers—CIFOR based in Bogor, Indonesia; ICRAF and ILRI based in Nairobi, Kenya; and IITA based in Ibadan, Nigeria—announced the selection of new directors general for their Centers. Each CGIAR-supported Center is an autonomous institution, with an independent board. The appointments were made at the culmination of international searches. Brief profiles are sketched below.

CIFOR

David Kaimowitz has been selected as the new Director General of the Center for International Forestry Research (CIFOR) and will take up that position in August 2001. An economist by training, Dr. Kaimowitz joined CIFOR in 1995 and until recently was the team leader of CIFOR's program on underlying causes of deforestation, forest degradation, and changes in human welfare, which investigates ways in which policies and social trends outside the forest sector affect forests and the people who rely on them for daily needs and income. He has conducted research in Latin America, Africa, and Asia.

Dr. Kaimowitz completed a B.A. degree in development studies at the University of California–Berkeley and received M.A. and Ph.D. degrees in agricultural economics from the University of Wisconsin–Madison. He has published widely and wants to strengthen the special relationship that exists between CIFOR and its host country, Indonesia.

ICRAF

Dennis Garrity has been appointed fourth Director General of the International Centre for Research in Agroforestry (ICRAF). He will succeed Pedro Sanchez in October 2001. Dr. Garrity brings a wealth of CGIAR experience to the position, having worked at IRRI for 12 years. After join-

ing ICRAF in 1992, he successfully built one of the largest research programs covering Southeast Asia, with more than 40 international and national professional staff working in six countries. His work on developing agroforestry alternatives to slash-and-burn agriculture is widely recognized, as are his efforts to develop institutional innovations related to farmer-led organizations in sustainable agriculture and natural resources management. He has actively promoted the landcare movement in Southeast Asia.

Dr. Garrity received a B.Sc. in agriculture from Ohio State University, an M.Sc. in agronomy from the University of Philippines at Los Baños, and a Ph.D. in crop physiology from the University of Nebraska.

IITA

Peter Hartmann will be the sixth Director General of the International Institute of Tropical Agriculture (IITA), succeeding Lukas Brader in November 2001. An expert in agricultural economics, policy, and marketing, he has worked in Africa, and Latin America and the Caribbean. He was Director of International Programs at the University of Florida, where he helped develop institutional linkages with universities in Cameroon, Honduras, the Netherlands, Nicaragua, Nigeria, and Uganda as well as with international and national agricultural research cen-

ters. He also served as private sector advisor for USAID in Tanzania, and believes that training is a fundamental dimension of development.

Dr. Hartmann received an M.S. in agricultural marketing and a Ph.D. in agricultural policy and marketing from the University of Illinois.

ILRI

Carlos Seré was named Director General of the International Livestock Research Institute (ILRI), and will succeed Director General Hank Fitzhugh in December 2001. For the last seven years, Dr. Seré has worked for the Latin America and Caribbean office of the International Development Research Centre (Canada), first managing a portfolio of agricultural and natural resource management projects and later serving as regional director. His expertise includes tropical livestock production systems, foot-and-mouth disease, smallholder dairy farming, tropical pastures, and quantification of the costs and benefits of research. His CGIAR experience includes working at CIAT and CIP and serving as reviewer of the International Laboratory for Research on Animal Diseases (ILRAD), whose merger with ILCA led to the formation of ILRI).

Dr. Seré hails from Uruguay and received a Ph.D. in agricultural economics from the University of Hohenheim, Germany. 



CGIAR PROGRAM OF SEMINARS

Helping farmers to better manage land and water resources and battling livestock disease are some of the ways in which CGIAR scientists help promote sustainable agriculture for food security in developing countries. This year's meeting in Durban featured major presentations by the Centers on three significant topics: integrated natural resources management, improved management of water, and livestock disease.

Integrated Natural Resources Management and the CGIAR

"How we value and use natural resources, as commodities for trade, or for non-trade functions, or even for environmental services," are questions that can be best answered by using an integrated natural resources management (INRM) framework, said Joachim Voss, Director General, CIAT, and Chairman of the Inter-Center Task Force on INRM.

INRM is where the "brown side" of agriculture meets the "green side" of environment. It helps CGIAR scientists to better understand the context of the problems on which they are working and the context and systems for which they must develop solutions.

INRM is a conscious process for incorporating multiple aspects of natural resource use into a system of sustainable management to meet farmers and others' explicit production goals (including those tied to profitability and risk reduction) and to provide broad environmental and social benefits.

As an approach to management of complex technical change and dealing with complexity, INRM itself need not be complex. Voss offered a counter-intuitive example from CIAT's research to make this point. Climbing beans have tremendous potential on small, fertile

parcels of land. It follows that they would perform well in the highly fertile areas of Rwanda. To test the hypothesis, trials were conducted on a transect going from the poorest, most acidic, degraded, and eroded soils on the Nile Zaire crest, down to the more fertile areas. Much to everyone's surprise, adoption rates were highest in the high-altitude, low-fertility areas. Why? Because farmers concentrated organic matter and the small amounts of fertilizer they could buy on small plots so that they could double their returns by growing climbing beans. And the staking material, essential for climbing beans, required adoption of agroforestry systems. Therefore, farmers were able to create a triple win situation: reduced erosion, improved soil fertility, and greatly enhanced productivity.

As a framework, INRM allows researchers to capture contextual factors. Hence it can benefit work on global issues such as climate change, the water crisis, conservation and use of genetic resources, desertification, and conservation of the Amazon.

An international "Integrated Management for Sustainable Agriculture, Forestry, and Fisheries" workshop will be held in Cali, Colombia, August 28–31.

Solving the World's Water Crisis – A CGIAR Perspective

Agriculture is a profligate user of water. Seventy percent of all water withdrawn is used for irrigation. Other pressures—pollution, salinization, rising demand for drinking water from teeming cities, industrialization, and the need for ecological services—are reducing the overall availability of water. Recognizing the threat of the water crisis to sustainable develop-

ment, at the Millennium Conference held last year, U.N. Secretary General Kofi Annan said, "We need a 'Blue Revolution' in agriculture that focuses on increasing productivity per unit of water—more crop per drop."

Ensuring the availability of water for food and environmental security was the focus of a presentation by David Molden, Principal Researcher, IWMI. In exploring anew the question of productivity of water in agriculture, IWMI conducted a "water accounting exercise" in the irrigated area in Chistian, Pakistan. Of the 740 million cubic meters of water that entered the area from irrigation deliveries, rain, and groundwater, nearly 90 percent was used by agriculture. The finding clearly indicated that management of water in agriculture is the key to solving the water crisis. "From an IWMI perspective, in essence, the global challenge for us is to grow more food with less water – decreasing water use in agriculture to meet environmental goals and other human needs," said Molden. "IWMI research must provide feasible, sustainable choices and solutions that do not exist today."

"Can the CGIAR solve the world water crisis?" That provocative question was posed by Frank Rijsberman, Director General, IWMI. Rijsberman reported that IWMI is developing a new program, Comprehensive Assessment of Water Management, with strong support from ICARDA, ICRISAT, IIRI, ICLARM, and IFPRI. Future attempts to achieve food security, reduce poverty, and protect the environment will require a paradigm shift, one that requires a systematic examination of productivity in yield per unit of water as well as yield per unit of land, said Rijsberman. Also needed, he said, is an integrated, systemwide approach encompassing genetic improve-



ment, better management of soil water and soil fertility, improved delivery of water services, as well as a participatory approach to natural resources management with a focus on resource-poor farmers. "The answer from IWMI to the provocative question is a resounding "Yes," said Rijsberman.

Costs and Cures of Livestock Disease – A CGIAR Perspective

"Livestock disease has been etched in our collective memory as never before," said Hank Fitzhugh, Director General, ILRI, in kicking off a special seminar on livestock disease and its implications for trade and agricultural competitiveness. The recent outbreak of foot-and-mouth (FMD) disease has caused enormous losses running into billions of dollars in the United Kingdom, said Fitzhugh. The disease affected nearly every farm there and caused a major setback to Britain's tourism industry.

Why should the CGIAR care about livestock diseases? Quite simply, because of their adverse impacts on the food security, nutrition, health, and well-being of poor rural communities. But we should also care about them for reasons of enlightened self-interest, suggested Fitzhugh. Globalization of disease allows an influenza virus to hop on a jet plane and cross continents.

A livestock revolution is underway, reported Fitzhugh. Demand for meat and milk products is expected to more than double during the next 20 years. Livestock disease results in lost production potential and diminished marketing opportunities for the poor. Moreover, the poor are the people who live close to livestock and run the risk of contracting transmitted diseases. Trade standards and in-country regulations and restrictions also work against the poor. "Livestock disease is a tremen-

dous disincentive," said Fitzhugh. "What incentive do the poor have to invest in better feed, better genetics, better health care if their animals are at risk of death and loss?" he asked.

In *Guns, Germs, and Steel*, Jared Diamond points out the consequences of major diseases originating in livestock and infecting humans in the New World and Pacific Islands during the past 13,000 years. Those consequences are only the tip of the proverbial iceberg. A University of Edinburgh study found that 1,709 organisms cause diseases in people and that nearly 50 percent of those organisms (called zoonoses) are naturally transmitted from animals to people. Of the 1,709 organisms, 156 cause the fairly new diseases, such as ebola and BSE, that make the headlines. Of those 156 organisms, 114 are zoonoses.

Milk-borne diseases—tuberculosis, brucellosis, and a variant of *E. coli*, 157—pose serious threats to human health, especially in sub-Saharan Africa, where 80 to 90 percent of milk is not pasteurized. Pasteurization increases the cost of milk by 30 percent in rural areas, and by nearly 70 percent in peri-urban areas. To avoid milk-borne disease the poor generally boil their milk.

ILRI's pro-poor research focuses on the acquisition of knowledge about diseases, their causes, and their consequences. Working with partners, ILRI is developing diagnostics, vaccines, and various therapeutics. The Institute is also working on effective delivery services. A good vaccine that is not delivered in viable form, or not delivered at all, is useless.

The session also featured presentations on FMD outbreak in KwaZulu-Natal Province, South Africa, and by the World Organization for Animal Health, known by its French acronym OIE. 🌿

CIAT JOINS CONDESAN

CIAT has joined the Andean ecoregional program CONDESAN (Consortium for the Sustainable Development of the Andes) and will contribute to the program through its community-based watershed resource management project, usually known as the Hillside Project. CIP is already a member of CONDESAN.

"We are very pleased with CIAT's decision to join CONDESAN" said Jaime Tola, President of the CONDESAN Board of Directors. "It considerably strengthens the CGIAR-CONDESAN partnership."

CIAT's Hillside Project is recognized for addressing critical resource management issues by developing decision-support tools that combine the best of scientific research with participatory methods and farmers' knowledge in Central America. CIAT will also bring its knowledge and experience in maize, bean, and forage commodity research to the ecoregional issues addressed by CONDESAN.

CONDESAN was established in 1993 in response to growing interest in natural resource management and ecoregional research within the CGIAR. CONDESAN brings together a coalition of 75 development institutions in the Andes. 🌿



CHINA-CGIAR PARTNERSHIP STRENGTHENS

CGIAR's partnership with the Peoples Republic of China received a boost with the opening of a new Secretariat office in Beijing on February 23, 2001. Established as China Leading Group for Coordination of China-CGIAR Cooperation, the office is housed at the Chinese Academy of Agricultural Science (CAAS) and will be responsible for coordination of collaboration between the CGIAR and Chinese agricultural research institutions. Dr. Zhao Longyue will chair the group.

The inaugural ceremony was chaired by Dr. Zhang Lijian, Vice President of CAAS. Making presentations were Mr. Liu Jian, Vice Minister of Agriculture; Dr. Zhao Longyue, Deputy Director General of the Department of International Cooperation at the Ministry of Agriculture; and Professor Lu Feijie, President of CAAS. Dr. Ren Wang, Deputy Director General of IRRI, represented the CGIAR. Researchers from CIFOR, CIMMYT, CIP, ILRI, and IPGRI attended the ceremony.

The new Secretariat will play a key role in strengthening the China-CGIAR partnership and helping ensure that the fruits of agricultural research benefit China's farming communities. Currently, 11 Centers have formal links with Chinese research institutions, and five Centers operate offices in Beijing. 🌾

IBSRAM AND IWMI RESEARCH PROGRAMS MERGE

CGIAR's expertise in sustainable land and water management was strengthened when research programs of the Bangkok-based International Board for Soil Research and Management (IBSRAM) and IWMI were merged.

"We are very pleased with the merger," said Frank Rijsberman and Eric Craswell, Directors General of IWMI and the former IBSRAM. "The result is an international research institute that combines expertise in sustainable water and land resources management with a focus on poverty."

IWMI, founded in 1985 as the International Irrigation Management Institute, broadened its scope by moving from irrigation to water management in a river basin context. IWMI is headquartered in Colombo, Sri Lanka. With the merger, IBSRAM's former office is now IWMI's new Southeast Asia Regional office in Kasetsart University in Bangkok, Bangkok.

IBSRAM brings to IWMI 15 years of research expertise in sustainable land management: soil erosion, management of sloping lands and acid soils, nutrient balances of farms on marginal lands, nutrient recycling in urban and peri-urban areas, land management information for farmers, and a training program on land and water legislation.

The merger helps IWMI to enhance its research capacities in land and water management, create innovative programs that foster broad cooperation, and assist in building the technical and institutional capacities of national agricultural research and extension systems of developing countries. 🌾

2000 CGIAR SCIENCE AWARDS



to Alberto Barrion, IRRI, Outstanding Local Scientist



to Ellen Payongayong, IFPRI, Outstanding Local Scientific Support Staff



to Bernard Vanlauwe, IITA, Promising Young Scientist



to CIMMYT, IRRI, and National Agricultural Research Systems of Bangladesh, India, Nepal, and Pakistan, in the Rice-Wheat Consortium for the Indo-Gangetic Plains, Outstanding Scientific Partnership

Honor Roll

Venkatraman Balaji, Head, Information Systems Unit, ICRISAT, was awarded the prestigious World Technology Award for his pioneering work in the use of electronic information technologies to better the lives of villagers. Balaji is the first Indian to receive this award, and joins a stellar cast of awardees including Shawn Fanning (Napster), Gordon Moore (Intel), and Craig Venter (Celera).

Carlos Ochoa, Scientist Emeritus, CIP, was awarded the first William L. Brown Award for Excellence in Genetic Resources Conservation by Genetic Resources Communications Systems (GRCS), publishers of Diversity magazine.

Francis Idachaba, Principal Research Scientist, ISNAR, was conferred the Order of Officer of the Federal Republic (OFR) in the Millennium National Honors List issued by the President of Nigeria.

Pedro A Sanchez, Director General, ICRAF, was awarded an honorary doctorate (honoris causa) by the Catholic University of Leuven (KU Leuven), Belgium. The University, one of the oldest institutions of higher learning in Europe, was founded in 1425 by Pope Martinus V. In the 16th century, famous scientists such as Erasmus, Vesalius, and Mercator were among its members.

IPGRI moves to a new home

IPGRI's new headquarters were inaugurated on July 3, 2001 by President Carlo Azeglio Ciampi of Italy. The distinguished ceremony included representatives from the Italian Ministry of Foreign Affairs, IFAD, FAO, CGIAR, and members of the diplomatic corps.

To mark the inauguration, a new publication "The Mulino at Maccarese" (a grain silo and mill are called mulino in Italian) was released. The area around IPGRI's new headquarters is known as Maccarese and it has a rich agricultural heritage. IPGRI's new headquarters is less than 10 minutes from Rome's Fiumicino airport, and in close proximity to a few Italian research institutions.

IPGRI's new address is:

Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino) Rome
Italy

Tel: (39) 06 6118.1
Fax: (39) 06 6197.9661
Email: ipgri@cgiar.org

CIMMYT International Conference on Impacts of Agricultural Research

CIMMYT, in partnership with the Standing Panel on Impact Assessment (SPIA) of the CGIAR's Technical Advisory Committee (TAC), is hosting a major international conference—Impacts of Agricultural Research and Development: Why Has Impact Assessment Research Not Made More of a Difference? February 4–7, 2002, in San José, Costa Rica.

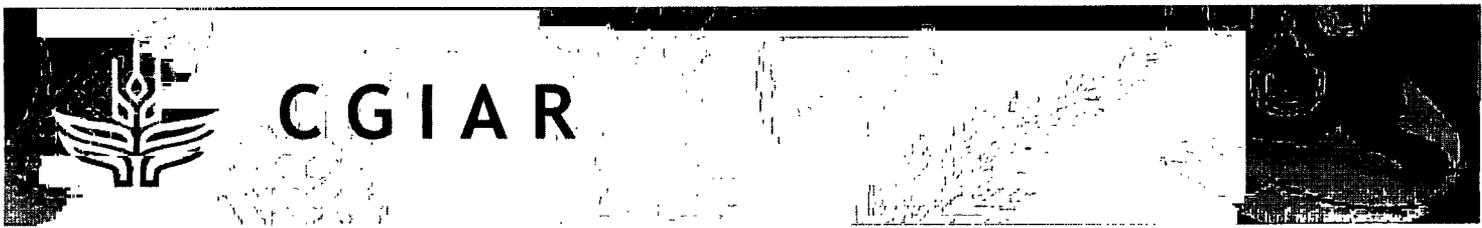
The event is being organized by Prabhu Pingali, director of CIMMYT's economics program. More information and registration details can be obtained at the conference website (www.cimmyt.org/research/economics/impacts) or by sending an e-mail to impacts@cgiar.org. Please mark your calendars.

Sad News

Ralph W. Cummings, one of the founders of the CGIAR, passed away on June 25, 2001, in Raleigh, North Carolina. He served on the faculties of Cornell University and North Carolina State University; as Director General of IRRI, ICRISAT, and IIMI (IWMI's predecessor); as Chairman of TAC (1977–1982); and as Chairman of the boards of ILCA and ICRAF. His multifaceted contributions to international agricultural development began in 1957 with his appointment as Field Director of the Rockefeller Foundation for India, where he played a catalytic role in elevating India's agricultural research, extension, and higher education system to today's world-class levels. In 1988, he was awarded the Presidential End Hunger Award.

John L. Dillon, Emeritus Professor at the University of New England and a long-standing friend and supporter of the CGIAR, passed away on June 5, 2001, in Armidale, NSW, Australia. He fought a valiant battle against cancer. John held many important positions at the CGIAR, including serving as Chairman of the CGIAR Committee of Board Chairs (CBC); Chairman of the board of the former International Livestock Research Centre for Africa (ILCA); and Chairman of the boards of ISNAR, ICRISAT, and ICLARM. In May 2001, with the generous support of the Australian Center for International Agricultural Research (ACIAR), the John L. Dillon Social Science and Aquatic Resources Economics Laboratory was inaugurated at the new headquarters of ICLARM.

John D. Axtell, Lynn Distinguished Professor of Agronomy at Purdue University and a CGIAR supporter, passed away on December 2, 2000. In a career spanning 35 years, he made significant contributions in basic research, germplasm development, graduate education, and scientific leadership in plant breeding and genetics. Many in the CGIAR will remember him for his leadership of the International Sorghum and Millet Collaborative Research Program.



CGIAR Chairman
Ian Johnson

CGIAR Director
Francisco Reifschneider

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World Bank

CGIAR-SUPPORTED FUTURE HARVEST CENTERS

- **International Center for Tropical Agriculture (CIAT)**
Cali, Colombia
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www.ciat.cgiar.org
- **Center for International Forestry Research (CIFOR)**
Bogor, Indonesia
Phone: (62-251) 622 622
www.cifor.cgiar.org
- **International Center for the Improvement of Maize and Wheat (CIMMYT)**
Mexico City, Mexico
Phone: (52-5) 804 2004
www.cimmyt.cgiar.org
- **International Potato Center (CIP)**
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Phone: (51-1) 349-6017
www.cipotato.org
- **International Center for Agricultural Research In the Dry Areas (ICARDA)**
Aleppo, Syrian Arab Republic
Phone: (963-21) 2213433
www.icarda.cgiar.org
- **International Center for Living Aquatic Resources Management (ICLARM) – The World Fish Center**
Penang, Malaysia
Phone: (60-4) 626-1606
www.cgiar.org/iclarm
- **International Centre for Research in Agroforestry (ICRAF)**
Nairobi, Kenya
Phone: (254-2) 524000
www.icraf.cgiar.org
- **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)**
Patancheru, Andhra Pradesh, India
Phone: (91-40) 3296161
www.icrisat.org
- **International Food Policy Research Institute (IFPRI)**
Washington, DC, United States
Phone: (1-202) 862-5600
www.ifpri.org
- **International Institute of Tropical Agriculture (IITA)**
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www.iita.cgiar.org
- **International Livestock Research Institute (ILRI)**
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Phone: (254-2) 630743
www.cgiar.org/ilri
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Maccarese (Fiumicino) Rome
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www.ipgri.cgiar.org
- **International Rice Research Institute (IRRI)**
Los Baños, Philippines
Phone: (63-2) 8450563
www.cgiar.org/irri
- **International Service for National Agricultural Research (ISNAR)**
The Hague, The Netherlands
Phone: (31-70) 3496100
www.cgiar.org/isnar
- **International Water Management Institute (IWMI)**
Colombo, Sri Lanka
Phone: (94-1) 867404
www.cgiar.org/iwmi
- **West Africa Rice Development Association (WARDA)**
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