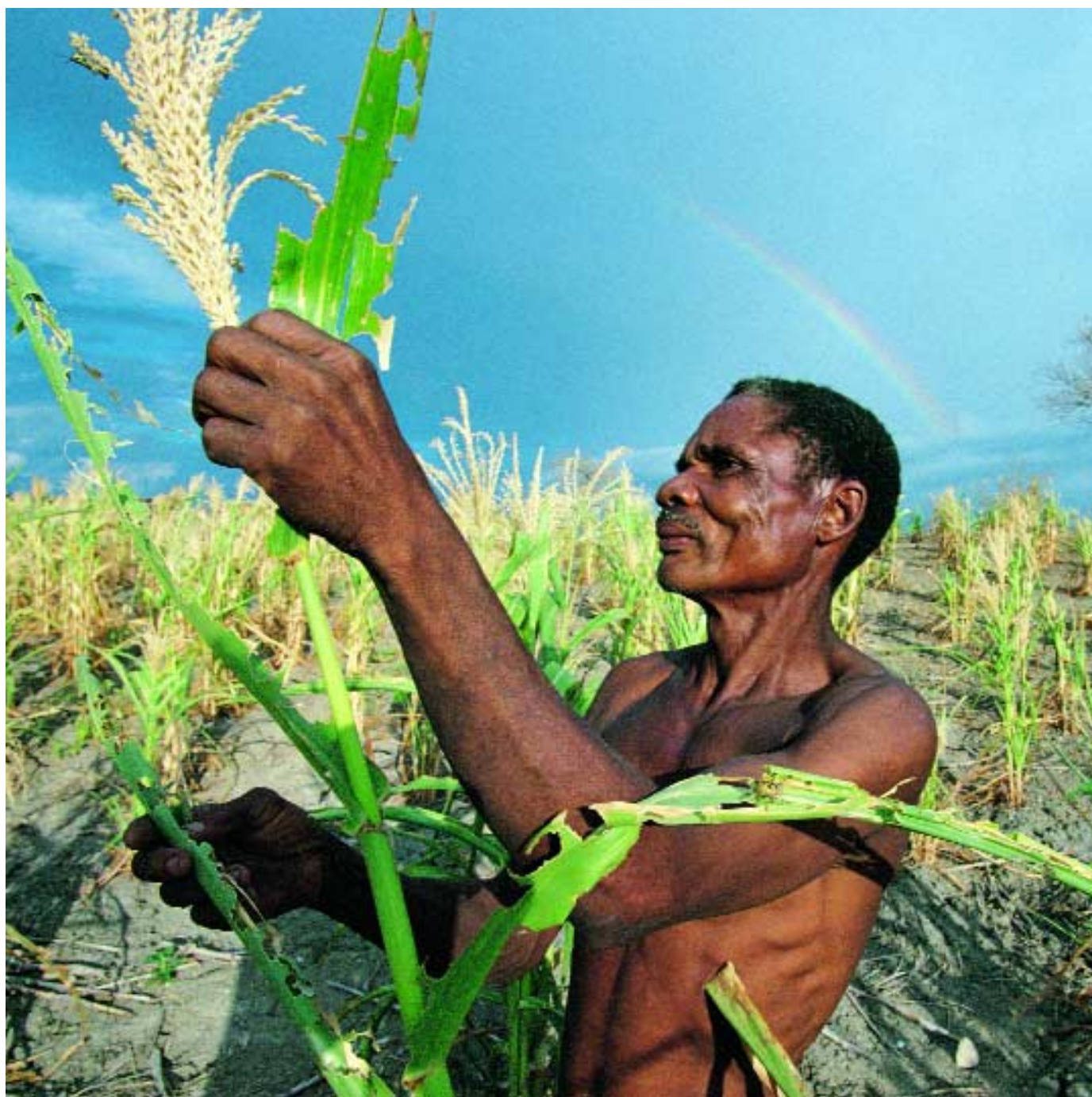




Consultative Group on International Agricultural Research

CGIAR ANNUAL REPORT 1999

SCIENCE FOR THE POOR AND THE ENVIRONMENT



CGIAR CENTERS CIAT: Centro Internacional de Agricultura Tropical (International Center for Tropical Agriculture), Colombia
CIFOR: Center for International Forestry Research, Indonesia CIMMYT: Centro Internacional de Mejoramiento de Maiz y Trigo
(International Center for the Improvement of Maize and Wheat), Mexico CIP: Centro Internacional de la Papa (International Potato
Center), Peru ICARDA: International Center for Agricultural Research in the Dry Areas, Syria ICLARM: International Center for Living
Aquatic Resources Management, Malaysia ICRAF: International Centre for Research in Agroforestry, Kenya ICRISAT: International
Crops Research Institute for the Semi-Arid Tropics, India IFPRI: International Food Policy Research Institute, United States
IITA: International Institute of Tropical Agriculture, Nigeria ILRI: International Livestock Research Institute, Kenya IPGRI: Interna-
tional Plant Genetic Resources Institute, Italy IRRI: International Rice Research Institute, The Philippines ISNAR: International
Service for National Agricultural Research, The Netherlands IWMI: International Water Management Institute, Sri Lanka
WARDA: West Africa Rice Development Association, Côte d'Ivoire

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OUR MISSION To contribute to food security and poverty eradication in developing countries through research, partnerships, capacity building, and policy support, promoting sustainable agricultural development based on the environmentally sound management of natural resources.



The Future Beckons



The marvels
of science are
exploding in
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Yet harnessing these marvels
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require redoubled efforts.

Ismail Serageldin, CGIAR Chairman

Message from the Chairman, Ismail Serageldin

Five years ago, when the CGIAR concluded a program of renewal and launched a regenerated CGIAR, we agreed that “the success of every program we espouse, every project we undertake, every endeavor we support, has to be measured by the extent of their contribution toward alleviating poverty.” That is a living commitment that requires frequent review and renewal. So it was appropriate that we returned to this theme at International Centers Week in 1999 (ICW99), our last meeting of the century, at which we decided to create a new vision to help us go out and meet the future.

The founders of the CGIAR created this unique institution to fight hunger, combat its cause, poverty, and inhibit the wider consequences of both. Their perceptive vision, formulated in the context of their times, has been fulfilled. Few of the outstanding scientific innovations of the past 100 years have had as great an impact on the lives of as many people as the “green revolution” technologies. They led to an agricultural transformation in much of Asia and Latin America, saving millions from the threat of starvation or death, preserving land and biodiversity, and reducing poverty by fueling broad economic growth.

Today, the global circumstances of poverty, hunger, and environmental degradation challenge us to transform agriculture yet again. The task is crucial and complex, involving both people and the environment. We have, for instance, to prevail over the bizarre irony that rural areas, where food is grown, are home to cruel poverty and hunger. We need, at the same time, to ensure that productivity is fully sustainable—that triumphs are not achieved at the expense of fragile natural resources.

The tasks appear formidable but, as M. S. Swaminathan, an elder statesman of the CGIAR, points out, “there are numerous opportunities now to harness the power of synergy between science and public

policy to address contemporary development issues such as the growing divide between the rich and the poor, the feminization of poverty, the dearth of jobs, overpopulation, climate change, and the loss of forests and biodiversity.” We must not—we dare not—lose those opportunities.

So, we are challenged to design a new vision for a new millennium, indeed, a new age. It is an age in which the marvels of science are exploding in myriad ways. Yet harnessing these marvels to end human misery, promote sustainable development, and empower the weak and the marginalized is a responsibility that will require redoubled efforts.

The new breakthroughs that we have been witnessing in the domains of molecular biotechnology involve more than just the ever-increasing speed and accuracy of genomic sequencing techniques, or a deepened understanding of the functioning of ever more genes, or the systematic unraveling of the encoding of proteins. All these developments are exciting. Far more than any single discovery, however, the changing face of the new science needs to be taken into account as we map our future course.

Today, the new science is more and more the preserve of the private sector in the industrialized North. The private sector mobilizes undreamed of amounts of research money, rapidly accelerating the pace of new discovery. This is commendable. But it is accomplished in a way that makes it increasingly difficult for those engaged in public goods research to deal with in terms of Intellectual Property Rights (IPR) and the need to access the toolkit of the new science productively, while continuing to make our output available to all. Resolving such conflicting approaches will require the negotiation and establishment of new boundaries, and the creation of new mechanisms.

But biotechnology and germplasm improvement are only a small part of the

CGIAR vision. Furthermore, beyond crops, to tackle poverty, there is a crying need for intensified attention to policy, to environmental issues (including water and soil), to livestock, to the forestry and aquatic sectors, and to ethics and safety in all we undertake.

Very little of this can be done without the full involvement of national agricultural research systems (NARS) in the South. The widely differing capacity of NARS makes capacity building of the weakest among them especially urgent. Moreover, any simple unified approach that does not contextualize research within the ecological and socio-economic context of the various countries will be unrealistic. Of similar significance and urgency is attention to gender issues and to participatory methods at all stages of agricultural transformation. Agricultural research, if it is to be relevant and realistic, must be designed and carried out in collaboration with farmers and farmers' organizations. The farmer in the field and the scientist at the laboratory bench will then be united by devotion to a common cause. Looming over all these issues will be the need for adequate investment over the long term.

The future beckons. There are difficulties ahead. There are, as well, rewards, not just for scientists, managers, and investors who can combine to create and design a new vision, but for the poor for whom there is now no vision and little hope. Their destiny must be the vision of us all. The critical issue, therefore, is that every instrument of science-based agricultural transformation should be mobilized in our efforts to feed the hungry, liberate the poor, and protect the environment. We cannot accept the notion that deprivation is imprinted on the genes of the poor and destitute and that misery is their inevitable destiny.

Overview from the Executive Secretary, Alexander von der Osten

As public attention was riveted on the beginning of a new millennium, three A's prevailed: awe, anxiety, and anticipation. The CGIAR System faced the same three As, but for its own, special reasons. The breadth and complexity of the challenges looming in the new millennium could only be described as awesome. Anxiety was inevitable in the face of such challenges. Yet, there was broad anticipation that the CGIAR could and would overcome them.

The third System Review, which was brought to closure at the CGIAR Mid-Term Meeting in Beijing (MTM99), said that the work of the CGIAR constitutes "a profoundly significant achievement, with an impact on the lives of millions who would otherwise have been hungry, malnourished, or would have died." The CGIAR was urged to build on the bedrock of past achievement, designing new strategies, new research roles, and new structures to grapple with poverty, hunger, and protection of the environment.

The nexus of challenges is formidable. Despite the great advances made in the twentieth century, more than a billion people continue to live in extreme poverty. Some 800 million people are hungry. Most of the world's poor live in rural areas at a time when rural regeneration is receiving less attention and investment than it deserves. At the same time, the natural resources on which all mankind depends are under siege.

In the face of these complexities, the

CGIAR System decided that looking ahead is vital. "More of the same" is untenable in the context of changed and changing conditions affecting the poor and disadvantaged. The task of harnessing dazzling scientific developments to support and fulfill the mission of the CGIAR requires continuing and consistent renewal. The CGIAR System decided to march boldly forward.

Thus, at International Centers Week, the CGIAR launched a visioning exercise. The Technical Advisory Committee (TAC) was mandated to carry out a forward looking assessment, with a five to ten year perspective, of what directions the CGIAR should take, how its research should be conducted, and with what partners it should work. TAC has responded to the remit decisively and in a participatory mode. The Centers have been fully consulted, and their accumulated wisdom and experience are being incorporated in the new vision of the CGIAR. Additionally, interested stakeholders have exchanged ideas and suggestions through an electronic "chat room." These and other consultations will strengthen the substance of proposals that are being crafted.



The challenges of the new millennium, it is worth repeating, are awesome. Financial uncertainty among some investors adds to the complexity of these challenges. CGIAR funding for the agreed research agenda is stable. The World Bank has maintained its support at \$50 million and, in response to the assessment of the System Review, has approved three-year funding for the CGIAR. More than stability is required, however, if the CGIAR is to realize its potential contribution to poverty alleviation.

The need for expanded funding comes at a time when many OECD/DAC countries are disenchanted with Official Development Assistance (ODA) and when pressures on ODA budgets have increased. These circumstances frequently trigger constraints and allocation readjustments. Investments in the CGIAR are vulnerable to all such tendencies. A long-term strategy for CGIAR funding is therefore critically important.

On the positive side, several trends noted in the period of this annual report provide grounds for optimism:

First, both as catalyst and member, the CGIAR is able to influence as well as to draw strength from the global agricultural research system. The CGIAR now collaborates with a wide range of partners, including regional and national agricultural research systems (NARS) in the South, non-governmental organizations (NGOs), advanced research organizations in the public and private sectors of both South and North, and the farm community. All

Most of the world's poor live in rural areas at a time when rural regeneration is receiving less attention and investment than it deserves.

of these partners meet at and use the Global Forum for Agricultural Research as an instrument of consultation. The CGIAR System is institutionally linked with NGOs, the private sector, and the international scientific community through partnership committees.

Second, the governance institutions of the CGIAR System are fully engaged in dealing with both short- and long-term issues that affect the System's capabilities. They have been fine-tuned through experience and strengthened with the creation of an *ad hoc* Consultative Council of all stakeholders representing the CGIAR System. In a short period of time, this innovation in governance has proved its usefulness as a mechanism for supporting sharply focused discussion and decision-making by the CGIAR as a whole.

Third, CGIAR Centers are committed to mobilizing frontier science and technology to attack poverty and hunger and to sustainably manage natural resources. Close and productive working relationships between Centers and NARS have evolved. The scientific excellence of the Centers is universally recognized.

Fourth, it is now well established that CGIAR Centers are able to influence agricultural policy, programs, and progress in individual countries. By way of example, a series of well-documented presentations at MTM99 showed how linkages between CGIAR Centers and Chinese NARS had affected almost every aspect of China's agricultural transformation from capacity

building through policy assessment to sustainable productivity.

Fifth, empirical evidence has clearly identified how and revealed to what extent agricultural research directly and indirectly alleviates poverty. The System's Impact Assessment and Evaluation Group has established scientific evidence of this chain of cause and effect, as has intensive field research that was presented during the year to an international audience at a symposium organized by CIAT.

The foremost message emerging from 1999 is that the CGIAR is poised for creative and productive change. The ultimate impact of this change will be on the lives of millions now barely touched by the potential of science and technology. Clearly, a sense of anticipation is apt.

The CGIAR is poised for creative and productive change.

About the Consultative Group on International Agricultural Research

The largest scientific network of its kind, the CGIAR works through global partnerships to promote food security, poverty eradication, and the sound management of natural resources—an ambitious and compelling agenda. Established in the 1970s, the CGIAR now pursues these objectives through the activities of 16 international research Centers. The CGIAR's 58 members—industrial and developing countries, private foundations, and regional and international organizations—provide vital financing, technical support, and strategic direction. A host of other public and private organizations work with the CGIAR as donors, research associates, and advisors.

The need for a special partnership within the agricultural research community focused on fighting hunger and poverty through productivity-oriented research was first recognized in the late 1960s, in response to the specter of widespread famine in parts of Asia. Leaders from 18 international organizations, foundations, and concerned governments formally joined together in 1971 as the first members of the CGIAR. Through their continuing support, hundreds of new wheat and rice varieties were developed, released, and planted in developing countries, adding an estimated \$50 billion to the value of world food supplies over two decades.

To build on these achievements, new CGIAR Centers were founded to work with national research institutions in pioneering improvements in other key food crops, such as legumes, roots, tubers and other cereals, and to concentrate on better management of livestock. Centers were established to work on the problems of dry, semi-arid, and tropical regions, and to conduct research on forestry, agroforestry, water management, fisheries and marine resources. Centers were also set up to analyze national and international food policies, and to build the capacity of agricultural research at the national level.

Today, 16 CGIAR Centers around the world are harnessing cutting-edge knowledge to help meet the world's enormous food needs—with a steadfast allegiance to scientific excellence and the public good. The advances made through CGIAR research are international public goods; new plant varieties, pest control methods, and resource management technologies are available free to all interested parties. For more information visit www.cgiar.org

Future Harvest

Two years ago, the 16 Centers supported by the CGIAR created a new entity designed to build support for international agricultural research. Now called Future Harvest, this entity has evolved into a charitable organization focused on food

and environmental research for a world with less poverty, less conflict, a healthier human family, well-nourished children, and a revitalized environment. Future Harvest supports research, promotes partnerships, and mobilizes the world community to meet the human and environmental challenges of today and tomorrow.

Future Harvest commissions research to examine the links between agriculture and critical issues such as peace, prosperity, environmental renewal, health, and the alleviation of human suffering. Outreach efforts are focused on innovative Internet-based and media relations strategies. More than a dozen world influentials serve as ambassadors for Future Harvest, including former U.S. President Jimmy Carter, Queen Noor of Jordan, Nobel Peace laureates Desmond Tutu and Oscar Arias, and Grameen Bank founder Muhammad Yunus.

During this new century, the earth will need to sustain an additional 75 million people each year. This task will require a commitment to science for food, the environment, and the world's poor. Future Harvest is working to ensure this commitment.

For more information visit www.futureharvest.org

The CGIAR's first public service announcement aired worldwide—including CNN International, Bloomberg Television (Asia, Europe, United States), Star Television, and television stations in China and Germany—with the message that "hunger is everyone's concern."



In the News

Business World (The Philippines)

The CGIAR is ideally positioned to address the next compelling challenge that agricultural scientists must confront: combining conventional research with the promise of the genetic revolution.

Science magazine (United States)

The critical advances of the Green Revolution—and other work by the 16 international agricultural research Centers that make up the Consultative Group on International Agricultural Research (CGIAR)—helped world grain harvests more than double since 1960.

Frankfurter Allgemeine Zeitung (Germany)

Even though the CGIAR's budget comprises only 4 percent of the global expenditure on agricultural research, experts agree that its work is of strategic importance for the rest of agricultural research. More so, with returns on investment between 22 and 191 percent, CGIAR Centers exceed (those achieved by) similar private research institutions by far.

The New Republic (United States)

The CGIAR labs and their offshoots have been spectacularly successful, as the ever-declining incidence of world hunger attests. Indeed, economists generally believe that agricultural research is one of the best ways governments can spend money.

O Estado de S. Paulo (Brazil)

The CGIAR shows that 95 percent of population growth occurs in the poorest countries, and it is the only entity in the world that is dedicated exclusively to mobilizing the best that agricultural science has to offer on behalf of people suffering from poverty and malnutrition.

Op-ed by Jimmy Carter, *The International Herald Tribune*

Why has peace been so illusive? A recent report sponsored by Future Harvest and generated by the International Peace Research Institute in Oslo examines conflicts around the world and finds that unlike that in Kosovo, most of today's wars are fueled by poverty, not by ideology.

The Washington Post (United States)

Water, water not quite everywhere, and not enough of it. And what very little fresh water the world has, it is squandering. That's the message of the CGIAR as it looks to the needs of the planet's farms and urban areas in the next century.

The Financial Times (United Kingdom)

The world's major network of international agricultural research Centers, run by the CGIAR, has already pledged not to include such characteristics (genetic systems designed to prevent seed germination) in any plant breeding material they produce.

The Hindu (India)

The CGIAR, with its worldwide network of international agricultural research Centers, has a critical role to play in applying the new scientific advances for the basic needs of humanity. The Centers represent the only authoritative international scientific organization capable of harnessing the tremendous capacities of science to address the problems of the poor in the developing world.

The Globe and Mail (Canada)

"New ways must be developed to take advantage of this diminishing resource if humanity is to feed itself in the 21st century," said Mr. Serageldin, who heads the CGIAR. In an effort to improve water management, the group has compiled a massive electronic world water and climate atlas, a high-tech undertaking designed to assist local farmers, their bankers, government planners and even international financial groups.

China Daily (China)

Chinese officials vowed to intensify China's collaboration with the CGIAR, "which has been most fruitful since it first started in mid-1980s," in the upcoming new millennium.

"Invest in agricultural research and cultivate peace," Future Harvest's first public service announcement, was produced in nine languages and aired on CNN International, CNN Español, CNBC Europe, Star TV Asia, as well as television stations in the United States.

