

CGIAR NEWS

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH DECEMBER 1998

EXPERT PANEL CHARTS 21ST CENTURY CHALLENGES

The leadership of the CGIAR is key to ensuring that continuing advances in science and information technology are responsive to the public good, especially to the needs of the poor in the next century. This was among the principal findings of an independent expert panel that assessed the work of the CGIAR and presented its report at CGIAR's International Centers Week 1998 (ICW98). Maurice Strong, who headed the panel and serves as chairman of the Earth Council, provided an overview of the findings:

"A compelling moral and ethical imperative underpins our call for a global effort to harness the best of science to meet the needs of the poor and the environment. The Panel is convinced that at a time of rapid advances in modern science and technology, the persistence of hunger and extreme poverty is indefensible. Our challenge is to create a new public-private compact that respects intellectual property rights, but also brings the benefits of modern science to the poorest. Through its science and experience, the CGIAR can contribute to the solution of this problem."

All aspects of the US\$350 million CGIAR system, with a network of 16 international agricultural research centers around the world, were closely examined. A total of 29 major recommendations were put forward in areas relating to scientific research, system organization and governance, and relations with other institutions.

The CGIAR System Review Panel calls on the CGIAR to lead public research for "all humanity."

The "System Review" was the centerpiece for debate and discussion during ICW98 held in Washington (see related article).

The Panel confirmed that investing in the CGIAR has produced a high rate of return for developing countries. "I firmly believe that the CGIAR has been the most effective use of official development assistance bar none," said Panel Chair Strong. His view is supported by independent studies showing that rates of return on agricultural research

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ICW98 TACKLES SCIENTIFIC, ENVIRONMENTAL AND ORGANIZATIONAL ISSUES

More than 500 scientists, government officials and organizational representatives converged on the World Bank's headquarters in Washington, D.C. to participate in CGIAR's International Centers Week 1998 (ICW98). The World Bank President, James Wolfensohn, opened the meeting by praising the CGIAR's "extraordinary achievements" and recalling that one of his first lessons in development economics was at the hands of CGIAR colleagues in Mexico, where he trudged through the fields talking with farmers.

The report of the System Review Panel has "extraordinary importance to economic development and to the work of the World Bank," Mr. Wolfensohn said. Agriculture and rural development are central to the

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21ST CENTURY CHALLENGES

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are consistently high (65 percent on rice in India and Indonesia, and 50 percent on wheat in all developing countries.)

This third major review of the CGIAR System was launched in mid-1997. The Panel's principal conclusions and recommendations included the following:

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- The world community needs the CGIAR more than ever because food security in developing countries will be more difficult to attain in the next century;
- Scientific revolutions underway in biology and information technology are positive forces; but a strong CGIAR system (owned and trusted by both the North and the South) is essential to ensure that the poor in the developing world benefit from innovation;
- The CGIAR should provide strong support to a strategy aimed at reducing poverty, hunger, and environmental degradation in Africa;
- The CGIAR should conduct public goods research, and it should continue to depend on official development assistance for its financing. New sources of funds and partnerships with the private sector will emerge with time;
- The CGIAR should launch a global initiative to conserve genetic resources and provide the means for their sustainable use. Centers' crop species collections (numbering 600,000 accessions) will play a critical role in this initiative. The CGIAR should also help to ensure adherence to the Convention on Biological Diversity;
- The CGIAR should establish a special unit to help ensure that new developments in biotechnology are used safely for the benefit of the poor and the global environment. The CGIAR also needs to ensure public transparency in these research mechanisms;
- The CGIAR should establish a global network linking crop productivity research with environmentally-sound natural resource management; and
- The CGIAR should help to develop "rules of engagement" for the public and private sectors that promote access to the means of food production, as well as food, as a human right.

CGIAR's crop species collections

(numbering 600,000 accessions)

will play a critical role in a global initiative to conserve genetic resources and provide the means for their sustainable use.

The review panel was composed of experts from many fields including science, industry and government: Bruce Alberts, President of the National Academy of Sciences (USA), Kenzo Hemmi, Professor at Toyo Eiwa Women's University (Japan), Yolanda Kakabadse, Minister of Environment (Ecuador), Klaus Leisinger, Executive Director of the Novartis Foundation for Sustainable Development (Germany), Whitney MacMillan, former CEO and Chairman of Cargill, Inc. (USA), Bongwiwe Njobe-Mbuli, Director General for Agriculture (South Africa), Emil Salim, Professor of Economics, Jakarta (Indonesia), and M.S. Swaminathan, Chairman of the M.S. Swaminathan Research Foundation (India). Mahendra Shah (U.K.), served as Executive Secretary of the CGIAR System Review. 

CGIAR Acts on “Terminator Technology”

Biotechnology research can enhance a plant’s ability to fend off assaults from insects, extreme weather and herbicides. But one innovation emerging from plant genetics laboratories would ensure that these attributes could not be passed to the next generation. Companies can now ensure that genetically modified plants produce sterile seeds, which would keep farmers coming back to them for fresh seed every year.

In one of its final decisions during ICW98, the CGIAR

adopted a statement recommending that its 16 research institutes ban the use of such so-called “terminator technology” in their crop-improvement programs. It reads:

“The International Agricultural Research Centers supported by the CGIAR system, which are engaged in breeding new crop varieties for resource poor farmers, will not incorporate into their breeding materials any genetic systems designed to prevent seed germination.”

ICW98

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Bank’s work in alleviating poverty, he explained, stressing that the World Bank supports the CGIAR’s work 100 percent.

CGIAR Chairman Ismail Serageldin said that the System Review Panel gave the CGIAR a ringing endorsement, and that the Group is particularly encouraged by the Panel’s judgement that “there can be no long-term agenda for eradicating poverty, ending hunger, and ensuring sustainable food security without the CGIAR.”

The Group initially discussed the System Review Panel report in opening plenary sessions; then it broke into three Working Groups to focus on key themes. Special open sessions on science, partnerships, and governance and finance were convened, allowing anyone attending ICW98 to participate. The working groups presented their comments on key issues and recommendations to the Group in plenary, where there was further debate.

Following discussion of the System Review Panel’s recommendations, the Group as a whole:

- Endorsed a new CGIAR mission statement emphasizing food security and poverty eradication:

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

- Endorsed the thrust of the Panel’s recommendations on the CGIAR’s scientific agenda and directions concerning integrated gene and natural resources management;
- Endorsed the goals and principles embodied in the System Review’s recommendations on broadening the CGIAR’s partnerships;
 - Endorsed the strategic thrust of the Panel’s recommendations on the CGIAR’s governance and finance.

The recommendation for establishment of a central board, however, was judged to require more detailed study.

Additional deliberations are necessary to act on the recommendations to establish the CGIAR as a legal entity, to

eliminate the co-sponsor status of UN agencies, to appoint a full-time Chairman and Chief Executive Officer, and to expand the CGIAR Secretariat’s services relating to Center staff recruitment.

To follow-up on many issues raised by the System Review report, the Group asked the Chairman to organize a Consultative Council to monitor the implementation of decisions made at ICW98, to arrange for or conduct follow-up studies, and to draft action-proposals for consideration at the CGIAR’s mid-term meeting (MTM99). The Consultative Council will be broadly representative of the System including members from North and South, from co-sponsors and multilateral donors, and from Centers and Standing Committees. The Council will consult with the System Review Panel, as appropriate.

The first Council meeting is January 27-28, 1999 in Brussels, hosted by the European Commission. The Council should have its recommendations available to the CGIAR 4-6 weeks before MTM99, which is scheduled for May 24-28 in Beijing, China. 

NEW IWMI ATLAS – A POWERFUL TOOL TO COPE WITH GLOBAL WATER CRISIS

Some 80 countries are already encountering water shortages today. Within 25 years, one-quarter of humanity is likely to suffer severe water scarcity. This mounting water crisis poses the single greatest natural threat to food security, human health and environmental balance in the 21st century.

“New ways must be developed to take advantage of this diminishing resource if humanity is to feed itself,” said CGIAR Chairman, Ismail Serageldin, as he unveiled a powerful new analytical tool developed by the International Water Management Institute (IWMI) in Sri Lanka. “To manage water better requires us to harness cutting edge technology. This is the promise of the new Atlas,” said Mr. Serageldin.

The World Water and Climate Atlas is a computerized tool that will allow scientists, agronomists, farmers, and specialists in irrigation and weather to extract and analyze key water and climate data on their regions. The Atlas displays the temperature, precipitation and other parameters for single months, crop seasons or annual periods across the entire globe. Additional information on population densities, river basins, vegetative indices, and other factors can be visually displayed and


analyzed. The Atlas, sponsored by the Japanese Government and the U.S. Agency for International Development, is available on the World Wide Web and on CD-ROM.

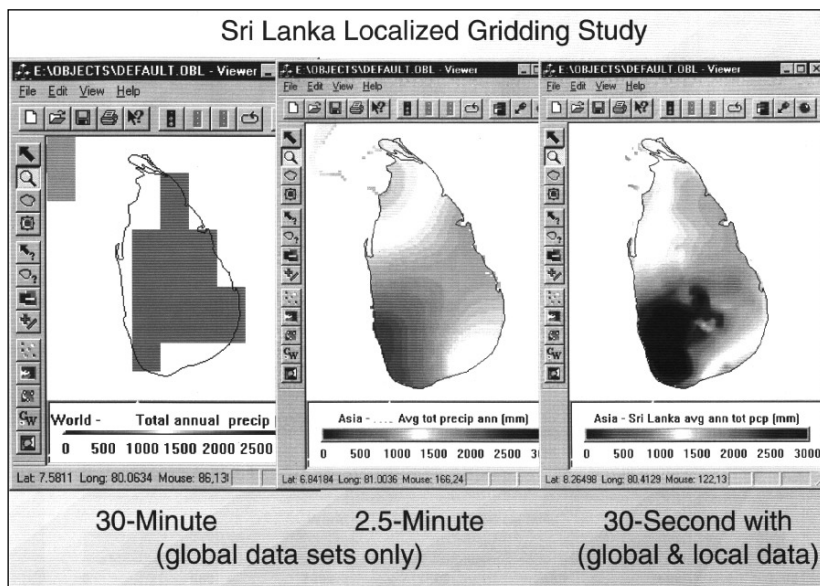
Some 80 percent of all water consumed goes to irrigated agriculture, which produces 30-40 percent of all food crops. But as surface water is fully used in the semi-arid regions of Asia, the

The initiative began in 1996 with the goal of assembling climate, water and natural resources data in a computerized format that could be easily used in geographical information systems (GIS) studies. The Atlas has become available just when a newly established World Commission on Water for the 21st Century is preparing a long-term vision for addressing water issues.

“Water development programs typically require 20 years or more to bring to fruition, so it is important to anticipate problems and take actions before they reach a crisis state,” said Mr. Serageldin, who is chairing the new World Commission established by the World Water Council in France. The Council is preparing to launch its World

Water Vision on water use in the next century, and will present initial results at the Second World Water Forum, to be held in The Hague in March 2000.

A computer slide show about the Atlas can be viewed on the IWMI web site: <http://www.iwmi.org>. 



International Water Management Institute

Middle East and Africa, groundwater tables are falling at an alarming rate. Moreover, both surface and groundwater are increasingly polluted in many regions.

“The Atlas gives professionals a more exact tool, based on a much larger data set, for planning irrigation and agricultural development,” said David Seckler, Director General of IWMI. “This is a major breakthrough.”

NOBEL LAUREATE HIGHLIGHTS ROLE OF SCIENCE IN DEVELOPMENT

Peter C. Doherty, winner of the 1996 Nobel Prize for Medicine, presented the annual Sir John Crawford Lecture as part of the activities surrounding ICW98.

Dr. Doherty is chairman of the Immunology Department at St. Jude Children's Hospital in Memphis, Tennessee. His distinguished career includes appointments at leading medical institutions in Australia and the United States. He has a long association with the CGIAR and served as a special advisor and member of the Board of Trustees of the International Livestock Research Institute (ILRI) in Nairobi, Kenya. Below are a few excerpts from his speech, which will be published in full by the CGIAR.

"All of us in this room are acutely aware of the importance of the CGIAR and are, I suspect, more than a little intimidated by the problems that this organization is trying to address. There can be no doubt in the mind of anyone who has spent time in the developing world that the dismal predictions that Malthus made more than 170 years ago are rapidly coming to fruition. All the major Scientific Academies share this conclusion. Uncontrolled population growth is leading to increased social turmoil, degradation of the environment and the appalling




Peter C. Doherty

prospect of periodic starvation at levels that will make current disasters seem like minor events."

"Holding scientists to an exclusive focus on immediate, practical outcomes ensures mediocrity and the rapid defecation of talented investigators. If the American research enterprise over the past 50 years had followed "short term solution" models, we would still be paying engineers to build better iron

lungs and cannon builders to put a man on the moon. Innovative science is a great deal more than engineering, whether it be mechanical, electrical or genetic, though there is always a stage where the engineers and managers take over to see the product through to production and distribution."

"The primary requirement for any viable research enterprise is that the scientific staff must be of top quality. First-rate scientists will tolerate many minor annoyances, but they will not accept a situation where it is impossible to explore and to test ideas. The best young investigators will take on the challenge of studying a complex disease problem like Trypanosomiasis, but they will not tolerate a short leash and being told what to do. Put such people back in an academic environment where

they do not see cattle with Trypanosomiasis and there is a real risk that they will lose focus and go off on some intellectually satisfying, but less practically-oriented direction. Such research is readily funded by biomedical research grants, and it is easy to forget quickly about the tough and in some senses unglamorous problems that are being tackled by the CGIAR. There is no Nobel Prize for agriculture." 

CGIAR TAKES ACTION IN CENTRAL AMERICAN RELIEF

Hurricane Mitch is widely considered to be the most devastating natural disaster to hit Central America this century. The dead and missing in Honduras and Nicaragua, the two countries hardest hit, are estimated in the thousands. Tens of thousands have been left homeless. Roads, bridges, and other infrastructure are in ruins, hindering relief efforts and delaying the return to normal life.

Further hardships are still to come. An estimated 80 percent of the export-oriented commercial agriculture in Honduras and Nicaragua was destroyed. More than half of the basic food crops beans, maize, and rice may also have been lost. Unless crop production is revitalized quickly, these countries will face serious food shortages and severe economic losses in 1999 and beyond.

SEED RELIEF

Under the auspices of the CGIAR's Eco-regional Program for Tropical America, four centers, CIAT, CIMMYT, CIP, and IPGRI, are mounting an emergency effort to rebuild small farmers' seed systems and to regenerate agriculture in Honduras and Nicaragua. This will be modeled on and draw lessons from the successful "Seeds of Hope" program carried out in Rwanda, after genocide and civil war shattered the country's crop production.

Within days after Mitch struck, the centers had contacted national partners in Honduras and Nicaragua to offer assistance. They had also appointed

coordinators for relief efforts at their headquarters and on-site. By mid-November the centers had developed a joint project proposal and were discussing it with two donors.

The proposal presents short- and medium-term plans for seed relief between now and late 1999 in support of national plans for rehabilitating agriculture. It also calls for longer term initiatives to mitigate damage to crop genetic diversity, work that will be coordinated by IPGRI through the CGIAR's System-wide Genetic Resources Program. Finally, the proposal underscores the need for redoubled efforts to reduce poverty and improve natural resource management in Honduras and Nicaragua in the wake of the disaster.

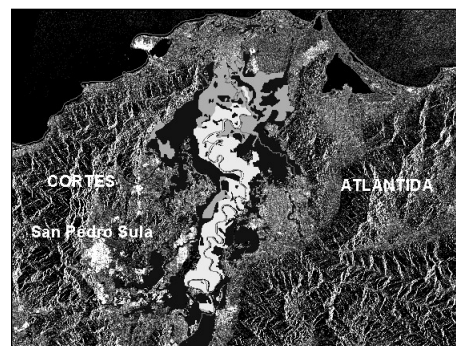
The most urgent task now is the assembly of seed supplies for planting in December to begin large-scale seed multiplication. CIAT, CIMMYT, and CIP are helping organize this task with their national partners through long standing crop research networks in Central America. Seed multiplication will take place at experiment stations and on commercial farms with irrigation and optimum growing conditions, both in neighboring countries, principally Costa Rica, as well as in Honduras and Nicaragua.

Given that many rural communities have been isolated, seed distribution in 1999 and beyond will need to be highly decentralized. For that purpose the CGIAR centers will work with a wide range of national institutions, local and international NGOs, and farmer groups. Only through

such efforts can seed of appropriate varieties reach farmers in time for first-season planting in May and again in October.

GIS AIDS EMERGENCY PLANNING

To aid damage assessment and relief efforts, CIAT has made its advanced capabilities in GIS available to national emergency planning committees in Tegucigalpa and Managua. One valuable tool is a digital atlas of Honduras, developed with Swiss government support, which contains extensive information about key features of the country's rural landscape.



Satellite image of flooded banana plantations in Honduras.

With Canadian help, CIAT is processing new maps, some derived from satellite radar images of Honduras and Nicaragua, that provide a clear picture of the landscape of disaster. Based on these maps, relief planners can pinpoint exactly where flooding and landslides have destroyed crops and identify the rural communities that have been most isolated. Tools developed to help improve natural resource management are thus proving to be of immeasurable value in a crisis. 🌿

CGIAR REACHES OUT TO CENTRAL ASIA AND THE CAUCASUS

Several of the world's most popular foods, including wheat and onions, have their genetic origins in the newly independent states of Central Asia and the Caucasus. Today, ironically, much of the genetic heritage of this economically struggling region is in jeopardy due to the widespread collapse of state institutions.

The nations are Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan in Central Asia, and Armenia, Azerbaijan, and Georgia in the Caucasus. Together they make up a new region called CAC. Each of the countries faces serious problems with supplies of seed, and no systems have been put in place to ensure the diffusion and adoption of new varieties. Without these innovations, crop yields are stagnating or declining.

Agricultural production as a whole, which has driven the region's economy and fed its people for centuries, is now seriously imperiled.

A new CGIAR program launched in 1998 is now backing a region-wide effort to help restore agricultural growth, while preserving and protecting genetic resources. Nine CGIAR centers will be contributing, including CIMMYT, CIP, ICARDA, ICRISAT, IFPRI, IWMI, ILRI, IPGRI, and ISNAR. ICARDA has taken the lead by establishing a coordination office

in Tashkent, Uzbekistan, and the first meeting of the steering committee, composed of representatives from CAC coun-



Rural food market in Central Asia

tries, CGIAR Centers and donors, was held there in September. During its mid-term meeting in Brasilia last Spring, the CGIAR endorsed an initial work program and allocated US\$2 million in start-up assistance. The total budget for the program is expected to reach US\$16 million over five years.

The effort to restore farm production and conserve genetic resources faces numerous challenges due to wide varia-

tions in the Region's physical and agricultural environments, which include lowland rainfed and irrigated croplands, lowland semi-arid rangeland, and mountains.

The CGIAR-supported effort will focus on numerous tasks: agroecological characterization of new farming systems and identification of production constraints; germplasm enhancement; improving seed supply systems; management and diversification of cropping systems; enhancing livestock production systems; improving irrigation and on-farm soil and water management; rehabilitation and management of rangelands; conservation of genetic resources; policy research promoting small farm development; training to upgrade technical and language skills; and information technology to assist exchange of ideas.

The program carries with it a sense of urgency. Any further delay in getting outside support and expertise to the region, especially to its national research institutions, could damage the potential for collaboration among the CAC's fragile agricultural institutions. The CGIAR's new commitment to assist the Region's farming sector couldn't be more timely. 🌱

CAN WE FEED OUR WORLD?

AN INTERVIEW WITH CGIAR'S CHAIRMAN*

As both World Bank Vice President for Special Programs and Chairman of the Consultative Group on International Agricultural Research, Ismail Serageldin understands the urgent need to increase agricultural production to feed a growing world population. But at the same time he worries that the growing privatization of biological research could hinder the effort. He recently discussed his concerns with Newsweek's Mary Hager.

Q: Please define the problem as you see it?

“At the minimum, we will have three billion more people on the planet before the population stabilizes and almost all of those will be in the developing countries. The pressure this applies in terms of increased agricultural production is enormous. There is no way of dealing with poverty reduction or environmental protection or food security without transforming agricultural production at the small holder level in the developing countries. But, we are, in parallel, on the cusp of a new revolution in the biological sciences that is similar in scope and magnitude to the revolution in physics when all concepts were reinvented. Now that we are able to understand the structure of genes and are getting into the manipulation of genes, all sorts of possibilities are opening up. The application of that science could lead to



Ismail Serageldin

plants that are more drought resistant, more salt tolerant, less thirsty, more resistant to pests without pesticides.”

Q: It sounds like the problem already has a solution. What worries you?

“The breakthroughs that are coming are for the first time driven by proprietary science. By that I mean enormous biotechnology investments by the private sector, about US\$8-9 billion a year in the United States alone. People would not invest private money to drive science in this fashion if there was no possibility of recouping this investment with the protection of intellectual property. That's always been the case and

that's the way it should be, but it raises issues.

Q: Such as?

“There is a question as to the priorities of the research and whether public goods will get adequate treatment. Some of my friends in the private sector say why are you worried. Look at computers. Everything is driven by intellectual property rights but prices are coming down and computers are getting better and so what if your poor country clients are going to use a five year old computer. But I say what if it turns out to be like pharmaceuticals, another area largely driven by private sector investment with proprietary science, where we know that, despite the fact that malaria is the world's largest

disease today, there's hardly any investment in a malaria vaccine. I don't fault the private sector but I ask the question whether we should not have recognized that investment in a malaria vaccine is a public good along the same lines as the vaccination of children in poor countries.”

Q: What role do you see for public sector research?

“From the Green Revolution onwards, the stream of research that has come from CGIAR centers and national agricultural research systems has been an enormous boon to humanity. Part of that enormous success was based on an

implicit contract that the genetic material available in the gene banks was a public resource available for all of humanity and, on the other side the best of science was also available to be used for the problems of the poor.

Q: And that has changed?

“All of a sudden we are witnessing a change in the rules of the game where the best of science is no longer freely available because it is patented but the genetic collections are still considered public domain. We are seeing a transformation of a system that has served people well in the past. I’m not saying we should go back to the old system but I’m saying we need to use imagination to design a new system to reflect the new realities. We need to think about how we could strike a new form of public-private partnership which is “win-win” for both sides. This is important and urgent.”

Q: How has the change affected publicly-supported research?

“We certainly need to maintain strength of publicly funded research to deal with research that may not be directly or immediately available for profit maximization. While some in the private sector may be interested in the “terminator gene” technology, we are concerned with apomixis, the ability of getting hybrids to reproduce! Much of the application of biotechnology by the private sector has been on things like herbicide resistance but it doesn’t increase the yield very much and that is something we are concerned about. Pesticide resistance does address the same pests that we are confronting in some of the tropical countries and some of the poorest areas. Likewise, some commercial farming practices are designed for large scale applications rather than the complex farming systems where you have a little bit of food stock,

a little bit of cash crops, a little bit of agroforestry, a little bit of livestock, a little bit of aqua culture all on the same two hectares the family is farming.

Q: How would you change the new rules to create your “win-win”?

“This is an unusual idea, but why don’t we find a way of reducing the time horizon of the patents on the science and maintain the patents on the product. My point is that if people want to produce square tomatoes that’s fine and they can have the patents on the square tomatoes if I can use the same science and apply it to the problems of sorghum and millet and the foods that most of the poor people in the world will need. It would enable me to use that science to produce products they are not likely to compete with them in any way. To come back to the malaria example, if I can use the same science they would use for a viagra pill in order to produce a malaria pill, we would be able to have a real statement of the old parallelism of an open access and exchange system.

Q: If this patent refinement were possible, how widely would it be used?

“Today any probe or any promoter sequence you are likely to use in biotechnology research is bound to be patented. To be able to use that and produce something which is not susceptible to a potential claim becomes difficult and is likely to impede the ability of public research to develop public goods. If we could get a blanket exemption that says processes will have a life of 5 or 6 years whereas product patents have 20 year lives, that would mean international centers could do development work and national systems who would refine and do adaptive work. By the time it is ready for release to the farmers, five or six

years has passed and it has become in the public domain. Conversely if that proves too difficult in some technologies, then a scheme of compulsory licensing or some other structure might be used. We might come up with new partnerships where each side contributes to research and holds patents on the processes that are useful to them.

Q: It sounds as if there are several potential solutions?

“I’m not proposing a single answer as a magic bullet. I’m proposing serious dialogue between the private and the public sectors in order to ensure that there is adequate attention to the poor and the marginalization of public goods, and that the issue of proprietary science does not become a real threat. We have to design the system in a way where it reflects the mutual interests of everybody to collaborate in it. I fear we have a big challenge ahead of us but I believe that science has a major contribution to make for well being of humanity, for well being of the planet and well being of generations yet unborn.

Q: You have stressed urgency. Why?

“We have already 840 million people going hungry and two billion who are malnourished, and we are going to have three billion additional people on the planet in developing countries. I do not think that with stakes that high we can simply sit back and wait to see if the pattern of scientific development develops more like computers or more like pharmaceuticals. If it were to develop more like pharmaceuticals, then the equivalent of the case of malaria in agriculture is something the costs of which we cannot accept environmentally or in human terms or in poverty terms. 🌱

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“DOWN TO EARTH” CGIAR EXHIBIT INFORMS FINANCIAL COMMUNITY

Almost 50 colorful exhibit booths added a new communications dimension to the 1998 World Bank/ International Monetary Fund Annual Meetings. The Bank/Fund Exposition displayed the latest World Bank Group and IMF products, services and partnerships, and drew an estimated 4,000 visitors, including finance ministry

and central bank officials along with Bank and IMF staff.

One very compelling exhibit, entitled “How We Can Feed The World,” was created and assembled by the CGIAR and the World Bank’s Rural Development Department in co-operation with ILRI. It replicated the CGIAR’s African exhibit at the Disney Epcot Center’s annual show – “Gardening for Food Around the World.” The exhibit included displays of food products that are the subject of CGIAR research, and featured food-related crafts, like an African butter churn, as well as live demonstrations. It also offered literature about the critical importance of agricultural research for sustainable development. An ILRI scientist, Azage Tegegne, came from Ethiopia to



World Bank President James Wolfensohn and ILRI scientist Azage Tegegne

serve as the spokesman at the exhibit during the week of interactions.

Responding to the Expo in a letter to Bank President Wolfensohn, Mr. Vidar Jorgensen, founder of the World Economic Development Congress, wrote:

“After ten years of attending World Bank meetings, I actually learned more about World Bank current and potential programs in three hours at the exhibits than in the previous 10 years combined. It was a revolution of friendly transparency and convenient access. I saw for the first time a vision and potential that was dramatic, uplifting and motivational.”

The CGIAR was proud to play a part. 

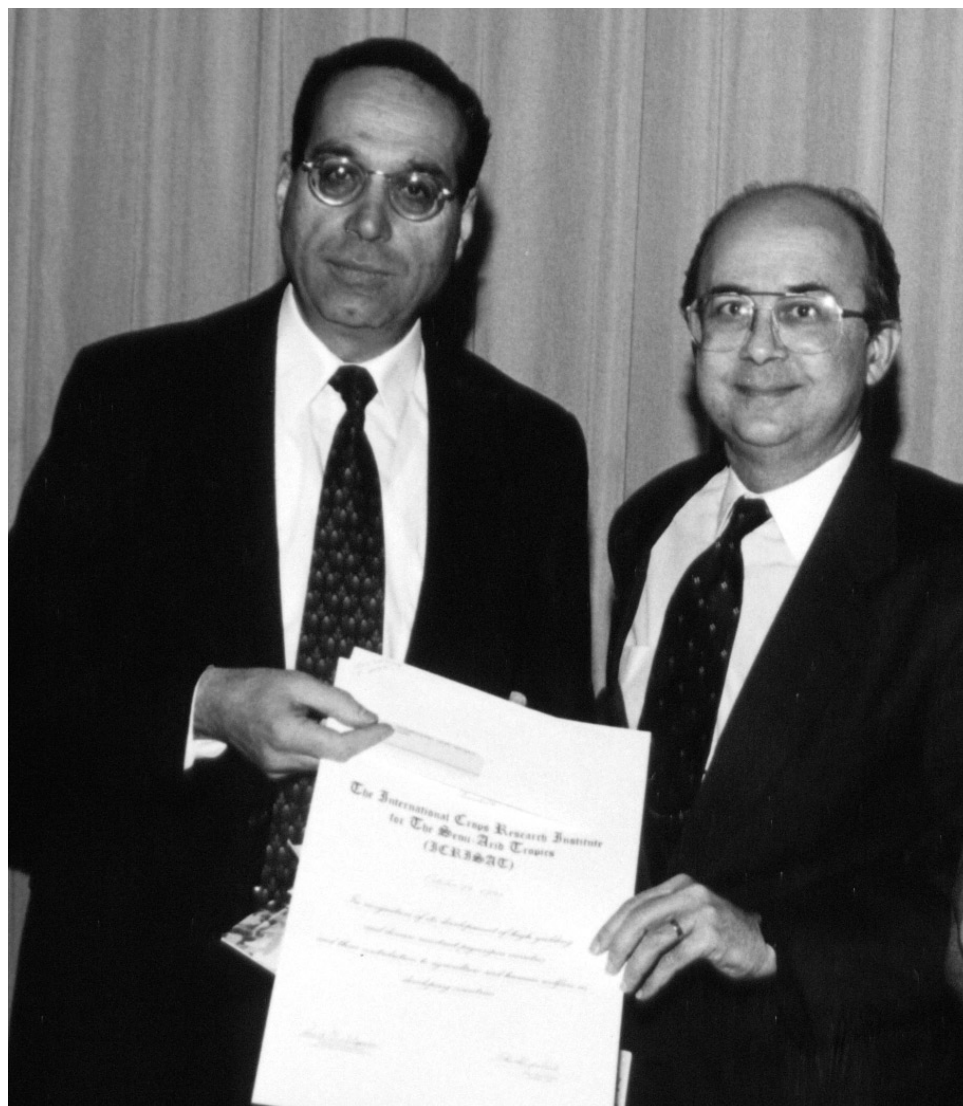
CGIAR SCIENCE AWARDS

The 1998 CGIAR's King Baudouin Award was presented to the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) for the development of high-yielding and disease resistant pigeonpea varieties and for its contribution to agriculture and human welfare in developing countries. This is the second time in a row that ICRISAT has won the award, the highest accolade conferred by the CGIAR for outstanding scientific work.

Pigeonpea is a grain legume that provides protein to the diets of more than one billion people worldwide, yet until the mid-1970s it had received little attention from scientific researchers. ICRISAT's work first targeted a plant disease, *Fusarium*, which had restricted output for millions of small holders in South Asia and Africa. An impact study in central and southern India found the value of these improvements to exceed US\$100 million, mostly accruing to small farmers.

According to an analysis carried out by the CGIAR Technical Advisory Committee that judged the Award, changes in the plant's architecture are just one of the many impressive innovations pioneered by ICRISAT. TAC wrote:

"Not only has the plant height been reduced but also the growing period altered from 10 months down to three or four, making it possible to raise the crop in cereal-legume rotation. This is the first example of a hybrid legume coming into



Shawki Barghouti and Ismail Serageldin

commercial production. In terms of impact, ICRISAT estimates that hybrids produce 25 to 35 percent more grain than traditional varieties. The spread of the hybrids through partnerships, beyond South Asia to Eastern and Southern Africa, enhances the international public goods nature of the output."

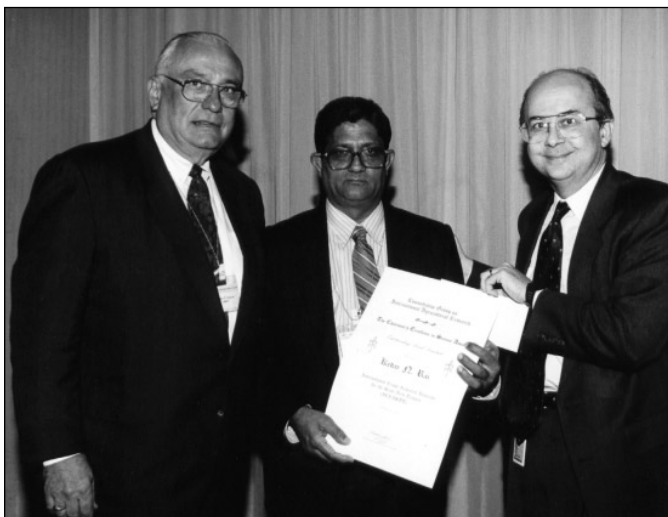
In accepting the award, ICRISAT Director General Shawki Barghouti said, "I'm honored to receive this award on behalf of the many scientists that have been working so hard on this important crop. It's a rich crop for the poor farmers, and I'm grateful to TAC that it has recognized their scientific achievements." 🌱

CGIAR SCIENCE AWARDS

The Chairman's Excellence in Science Awards recognize outstanding scientific achievements by CGIAR scientists and support staff. During a ceremony in the ICW plenary, CGIAR Chairman Ismail Serageldin presented the 1998 awards, together with Wally Falcon, CIMMYT Chairman.



Promising Young Scientist – Dr. Keith Ballingall, International Livestock Research Institute (ILRI), for his research on how the genetic make-up of cattle influences their immunizations with ILRI's novel vaccines. Left to right: Wally Falcon, Keith Ballingall and Ismail Serageldin.



Outstanding Local Scientist – Dr. Kedar N. Rai, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), for his major contributions to the pearl millet research program. Left to right: Wally Falcon, Dr. Kedar N. Rai and Ismail Serageldin.



Outstanding Local Scientific Support Staff – Dr. Imad Eujayl, International Center for Agricultural Research in the Dry Areas (ICARDA), for his outstanding contributions to ICARDA's biotechnology program. Left to right: Wally Falcon, Dr. Imad Eujayl and Ismail Serageldin.



Outstanding Scientific Partnership – *International Center for Living Aquatic Resources Management (ICLARM) and its partner institutions, the Bureau of Fisheries and Aquatic Resources (Philippines), Freshwater Aquaculture Center of the Central Luzon State University (Philippines), and Institute of Aquaculture Research (Norway), for producing a highly improved strain of tilapia, a hardy freshwater fish from Africa, under the Genetic Improvement of Farmed Tilapia (GIFT) project. GIFT provides a means of involving more poor people in aquaculture production and making fish more affordable for them. Left to right: Wally Falcon, Meryl J. Williams, Director General of ICLARM, Ismail Serageldin and Dr. Arsenio Camacho, Director of BFAR.*



By unanimous consent, the Group passed a resolution thanking Michel Petit for his service and many contributions as a cosponsor of the CGIAR representing the World Bank and as Chair of the Finance Committee.



Lowell Hardin, an internationally known agricultural economist who was one of the founders of the CGIAR system, received the Nyle Brady Award for his outstanding contributions to the CGIAR. Left to right: Roberto Lenton, UNDP, Lowell Hardin and Ismail Serageldin.

ANNOUNCEMENTS

Scientific Recognition of CGIAR Centers

For the seventh consecutive year, CIP was awarded the Special Prize of the International Potato Festival, held in Crevant, France. This year, the Festival featured 110 exhibitions from France, Belgium, Italy, Spain and Peru.

The Third World Network of Scientific Organisations has selected the Broad Bed Maker technology developed under the Joint Vertisol Project in Ethiopia by the Ethiopian Agricultural Research Organisations (EARO), Alemaya University, the Ministry of Agriculture, ICRISAT and ILRI as one of the 40 outstanding contributions to research and development in developing countries.

Scientific Recognition of CGIAR Scientists

Dr. Reinhardt Howeler of CIAT and Dr. Sanjaya Rajaram of CIMMYT received China's prestigious "Friendship Awards" for their outstanding contributions to Chinese agricultural development. The Awards are the highest honor that can be bestowed upon a foreign expert working in China.

During the first Latin American Seminar on Red Rice, held in Porto Alegre, Brazil, a special ceremony was held to recognize the valuable contributions of CIAT's James Gibbons (FLAR breeder) to rice breeding in the country.

Dr. Rajaram and Dr. Gurdev Khush of IRRI received the 1998 Rank Prize Funds Award for Nutrition "for the application of crop science and plant breeding technology to the improvement of rice and wheat yields so that the food supply to poor people is safeguarded."

Dr. Per Pinstруп-Andersen of IFPRI received the Oklahoma State University's Distinguished Alumni Award for his many contributions to the institution. Dr. Pinstруп-Andersen received his M.S. and Ph.D. from OSU. He was among six distinguished alumni who were honored.

Dr. Hugo Vivar, ICARDA's Barley Breeder and Regional Coordinator for Latin America based at CIMMYT, has been a recipient of the 1998 James and Mildred Oldfield/E. R. Jackman Team Award of the College of Agricultural Sciences of the Oregon State University, as a member of the Barley Stripe Rust Resistance Team.

Dr. Glenn L. Denning, ICRAF's new Director of Development, received a special medal from Vietnam's Government in recognition of his work with IRRI. The medal "For the Cause of Agriculture and Rural Development of Vietnam" was presented to Dr. Denning during the Vietnam-IRRI Collaborative Work Plan Meeting.

MILESTONES

ICRAF/World Vision Focus on Africa

ICRAF and World Vision International have teamed up to tackle food security problems in Africa. A Memorandum of Understanding was signed in 1998 to guide the working relationship and plan activities. World Vision is a Christian humanitarian development and relief agency working in 107 countries. It is dedicated to community-based sustainable development with special emphasis on food security and has wide experience working with communities at the village level. Similar initiatives are envisioned for Latin America and Southeast Asia.

CIP Potatoes Resistant to Late Blight Disease

CIP scientists recently harvested a new set of experimental potatoes expected to be resistant to all existing forms of late blight disease, the pathogen that precipitated the Irish potato famine of the 1840s. These new clones have arrived at a time when late blight, including new, virulent strains, is cutting global potato production by 15 percent. In developing countries alone, the disease is causing US\$2.5 billion in production losses and an additional US\$750 million in fungicide costs each year.

ICLARM/NASA Collaborate

Among the many important scientific activities aboard the Space Shuttle Discovery's November flight was high-resolution photographing of selected coral reefs around the world. NASA has already provided ICLARM with access to its 300,000-plus images of Earth from space. As part of a NASA special assignment for ICLARM, astronauts agreed to take new pictures of specific reefs to help enhance the ICLARM's GIS for studying reefs worldwide and the Reefbase data collection.

Special Honors

M.S. Swaminathan and James Peacock received special scrolls of honor for their contributions and accomplishments during their tenure as Chairs of the Genetic Resources Policy Committee (GRPC) and the Impact Assessment and Evaluation Group (IAEG), respectively. The Group also cited **Justin Yifu Lin** and **Keiji Kainuma** for their service to the CGIAR and the Technical Advisory Committee (TAC) on behalf of agriculture and human welfare in developing countries.

FAO, IPGRI and India Sign Agreement

The Government of India, IPGRI, and the FAO have signed an agreement to place India's coconut germplasm collections under the auspices of FAO.

THE CGIAR

CGIAR Chairman

Ismail Serageldin

CGIAR Executive Secretary

Alexander von der Osten

Cosponsors

Food and Agriculture Organization of the United Nations

United Nations Development Programme

United Nations Environment Programme

The World Bank

CGIAR Members

Countries

Australia, Austria, Bangladesh, Belgium, Brazil, Canada, China, Colombia, Côte d'Ivoire, Denmark, Egypt, Finland, France, Germany, India, Indonesia, Iran, Ireland, Italy, Japan, Kenya, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Portugal, Romania, Russian Federation, South Africa, Spain, Sweden, Switzerland, Syria, Thailand, Uganda, United Kingdom, United States of America

Foundations

Ford Foundation, Kellogg Foundation, Rockefeller Foundation

International and Regional Organizations

African Development Bank, Arab Fund for Economic and Social Development, Asian Development Bank, European Commission, Food and Agriculture Organization of the United Nations, Inter-American Development Bank, International Development Research Centre, International Fund for Agricultural Development, Opec Fund for International Development, United Nations Development Programme, United Nations Environment Programme, The World Bank

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