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REPORT



CGIAR

Consultative Group on International Agricultural Research

The CGIAR really meets everything that we care about in the Bank—bringing together



excellence, bringing together diversity, allowing people to have their own ingenuity, integrity, creativity, doing it on a national basis, being respectful of the experience of people throughout the world, drawing that experience together, not trying to impose something from the top, and benefiting from a truly multinational institution.

—James D. Wolfensohn, President of the World Bank Group, delivering the opening remarks at the celebration of the twenty-fifth anniversary of the CGIAR, International Centers Week, October 28, 1996, Washington, DC.

front: CALLIANDRA-
MAIZE INTERCROPPING IN
KENYA. CALLIANDRA IS
INCREASINGLY BEING
GROWN BY FARMERS FOR
USE AS FODDER. (ICRAF)

back: SCIENTIST USING
ELECTROPHORESIS IN
BIOTECHNOLOGY
RESEARCH. (CIP)



ABOUT THE CGIAR

An Overview

The Consultative Group on International Agricultural Research is an informal association of fifty-three public and private sector members from the South and North. The mission of the CGIAR is to contribute, through its research, to promoting sustainable agriculture for food security in developing countries. FAO, UNDP, UNEP, and the World Bank are the CGIAR's cosponsors. Seventeen CGIAR members are from the South, and twenty-one from the North; the remainder are foundations and international and regional organizations.

The vision of the CGIAR is of a world in which agricultural research has a positive impact on food security, income and employment generation, conservation of natural resources, and the environment. The defining terms of this vision are: less poverty; a healthier, better nourished human family; reduced pressure on fragile natural resources; and people-centered policies for sustainable development. The CGIAR fulfills its mission by adopting and supporting the implementation of a research agenda, carried out by a network of sixteen international agricultural research centers in full association with partner institutions.

Since its establishment in 1971—to consolidate and spread the benefits of international agricultural research beyond Asia, where unprecedented harvests from new varieties of rice and wheat overcame the threat of famine in the late 1960s—the research supported by the CGIAR has expanded and diversified, and membership in the CGIAR has increased.

Productivity and natural resources management are the twin pillars of CGIAR research on food crops, forestry, livestock, irrigation management, aquatic resources, and policy issues, and in its services to national agricultural research systems. Research supported by the CGIAR covers commodities that provide 75 percent of food energy and a similar share of protein requirements in developing countries.

Membership in the CGIAR is open to any country, foundation, or international or regional organization which supports the mission of the CGIAR; is willing to participate in decisionmaking and, in particular, the adoption of the system's research agenda; and is committed to providing support for the implementation of that agenda. Contributions by CGIAR members are voluntary, and are made as grants. Each CGIAR member is free to contribute directly to the center(s) and program(s) of its choice.

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Research activities included in the agreed agenda are expected to meet four criteria. They must:

- be aimed at producing research or research-related international public goods;
- be of high priority in terms of achieving the CGIAR's goals and objectives;
- have acceptable probabilities of success; and
- have no alternative producers or sources of supply with suitable costs or reliability.

Decisions on research policy are made, and research programs are carried out, in consultation and collaboration with a range of partners in the global agricultural research system, including national agricultural research systems in developing countries, universities, advanced research institutes, non-governmental organizations, farmer associations, community organizations, and the private sector.

R e s e a r c h a n d I t s I m p a c t

The founders of the CGIAR were convinced that new, science-based agricultural technologies could be effective weapons on the front lines in the battles against hunger and poverty. The continuing transformation of tropical agriculture has had a five-fold impact in developing countries, as described below.

Increased productivity has made more food available. Globally one of the greatest achievements of this century has been the phenomenal increase in agricultural productivity through the adoption of science-based technologies. The data in Asia is striking. Over the thirty years ending in 1991, rice production increased by 123 percent, with yields increasing by approximately 88 percent. Wheat production rose by 338 percent, with yields increasing by 204 percent, during the same period.

Intensive productivity has preserved land and biodiversity. Many hectares of environmentally sensitive land have been saved from cultivation, and their biodiversity protected, as a result of high-yield agricultural production on fertile land. Intensive production has increased the amount of food produced per hectare, thus substantially raising the number of people fed, without increasing land area.

Lower food prices and increased incomes have made more food accessible to more people. The impact of food access on poverty alleviation is manifest in many countries in Asia and Latin America. The consumer price of rice and wheat in Asia dropped by over 40 percent between 1960 and 1990. The poor have benefited greatly from expanded food security because they spend a higher proportion of their income on food than do others.

Higher calorie intake has improved nutrition and health, and increased life expectancy. This has been observed in developing countries generally, and specifically in the green revolution countries of Asia. In developing countries, life expectancy at birth has risen from an average of 47.4 years in 1960 to 1965 to 62.4 years in 1990 to 1995. Life expectancy at birth in India, a pioneering green revolution country, is 61 years. Similarly, the daily per capita calorie intake in developing countries has grown from 2,060 in 1960 to 2,470 in 1990. The figure for India is 2,230.

The contribution of agriculture to growth has led to overall economic advances. In this area as well, Asia, where agricultural development has almost always preceded development in general, is a showcase of results. In 1995, for instance, the 59 countries of Asia and the Pacific region recorded an average growth of 7.8 percent compared to a world average of 2.6 percent.

Meeting Future Challenges

As the world moves toward 2020, when the world's population will be about 9 billion—7 billion in developing countries—the world's very poor will number one and a half billion. Some 70 percent of the poor will be women. Within the same time frame, urbanization and increased income in developing countries are likely to change dietary habits, increasing the demand for livestock and high value agricultural products. This, in turn, will increase the demand for cereals and coarse grains for use as animal feed, in addition to their fundamental use as food for people.

Simultaneously, current trends suggest that the world will continue to face serious environmental concerns such as water and wind erosion, loss of soil nutrients, salinization, waterlogging, tropical deforestation, and loss of biodiversity, unless corrective measures are taken. Agriculture is at the heart of any effective solution to the nexus of problems encompassing population growth, environmental destruction, poverty, and food insecurity.

To prepare itself to meet these challenges, the CGIAR undertook an eighteen-month program of renewal, beginning in May 1994, to clarify its vision,

refocus its research agenda, broaden its partnerships, stabilize its finances, and tighten its governance and operations. A key event of the renewal program was a Ministerial-Level Meeting held in Lucerne, Switzerland in February 1995, at which participants adopted a *Declaration and Action Program* that serves as the charter of the CGIAR.

Based on the principles adopted as part of the renewal program, the CGIAR will focus on five major research thrusts over the next twenty years.

Improving Productivity. The CGIAR strives to make developing country agriculture more productive through genetic improvements in plants, livestock, fish, and trees, and through better management practices. One important feature of the CGIAR's breeding research is its focus on building into plants greater resistance to insects and diseases that adversely affect productivity and the stability of production in the tropics. While protecting farmers from losses, these improved plants protect the environment because they require little, if any, chemical controls.

Protecting the Environment. Conserving natural resources, especially soil and water, and reducing the impact of agriculture on the surrounding environment, is an essential, and growing, part of the CGIAR's efforts. The CGIAR plays a leading role in developing new research methods to identify long-term trends in major agricultural environments, and in developing solutions to pressing environmental problems.

Saving Biodiversity. The CGIAR holds in trust for the future one of the world's largest collections of *ex situ* genetic resources, containing over 600,000 accessions of more than 3,000 crop, forage, and pasture species. The collection includes improved varieties and, in substantial measure, the wild species from which those varieties were created. Duplicates of these materials are freely available to researchers around the world so that new gene combinations can be brought to bear on current problems. The CGIAR has placed its collections under the auspices of FAO as part of an international network of *ex situ* collections.

Improving Policies. Agricultural producers are heavily influenced by public policy. The CGIAR's policy research aims to help streamline and improve policies that strongly influence the spread of new technologies and the management and use of natural resources.

Strengthening National Programs. The CGIAR is committed to strengthen national agricultural research in developing countries through working relation-

ships with colleagues in national programs, strengthening skills in research administration and management, and formal training programs for research staff.


Looking to the future, the renewed CGIAR is committed to harnessing cutting-edge science, including biotechnology, to serve the needs of the poor and hungry. The CGIAR will carry out its work as part of a coalition of agricultural research partners; a Global Partnership committed to alleviating poverty, increasing productivity and resource efficiency to feed an expanding world population, conserving biodiversity, and protecting the environment. 



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LIST OF ACRONYMS

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|--------|---|
| CGIAR | Consultative Group on International Agricultural Research |
| DANIDA | Danish International Development Authority |
| EC | European Commission |
| FAO | Food and Agriculture Organization of the United Nations |
| FDI | Foreign Direct Investment |
| GATT | General Agreement on Tariffs and Trade |
| GDP | Gross Domestic Product |
| GIS | Geographic Information System(s) |
| GNP | Gross National Product |
| GRPC | Genetic Resources Policy Committee, CGIAR |
| IAEG | Impact Assessment and Evaluation Group, CGIAR |
| IAR | Institute of Agricultural Research, Njala, Sierra Leone |
| ICW | International Centers Week, CGIAR |
| IFAD | International Fund for Agricultural Development |
| IFDC | International Fertilizer Development Center |
| INGA | International Network on Genetics in Aquaculture, ICLARM |
| MTM | Mid-Term Meeting, CGIAR |
| NARS | National Agricultural Research System(s) |
| NGO | Non-governmental Organization |
| ODA | Official Development Assistance |
| PFA | Platform for Action, Fourth World Conference on Women |
| TAC | Technical Advisory Committee, CGIAR |
| TLU | Tropical Livestock Unit |
| TRIPS | Trade Related Intellectual Property Protection System |
| UN | United Nations |
| UNCED | United Nations Conference on Environment and Development |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNIFEM | United Nations Development Fund for Women |
| US | United States |
| USAID | United States Agency for International Development |
| WANA | West Asia and North Africa |
| \$ | All financial data are given in US dollars |

CGIAR CENTERS

| | |
|---------|--|
| CIAT | Centro Internacional de Agricultura Tropical |
| CIFOR | Center for International Forestry Research |
| CIMMYT | Centro Internacional de Mejoramiento de Maiz y Trigo |
| CIP | Centro Internacional de la Papa |
| ICARDA | International Center for Agricultural Research in the Dry Areas |
| ICLARM | International Center for Living Aquatic Resources Management |
| ICRAF | International Centre for Research in Agroforestry |
| ICRISAT | International Crops Research Institute for the Semi-Arid Tropics |
| IFPRI | International Food Policy Research Institute |
| IIMI | International Irrigation Management Institute |
| IITA | International Institute of Tropical Agriculture |
| ILRI | International Livestock Research Institute |
| IPGRI | International Plant Genetic Resources Institute |
| IRRI | International Rice Research Institute |
| ISNAR | International Service for National Agricultural Research |
| WARDA | West Africa Rice Development Association |