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List of Acronyms

ARI	Advanced Research Institution
CGIAR	Consultative Group on International Agricultural Research
DAC	Development Assistance Committee, OECD
FAO	Food and Agriculture Organization of the United Nations
GNP	Gross National Product
IAEG	Impact Assessment and Evaluation Group, CGIAR
ICW	International Centers Week, CGIAR
IFAD	International Fund for Agricultural Development
IICA	Instituto Internacional de Cooperación para la Agricultura
IRM	Integrated Resource Management, ICLARM
LAC	Latin America and the Caribbean
MTM	Mid-Term Meeting, CGIAR
NARS	National Agricultural Research System(s)
NGO	Non-Governmental Organization
TAC	Technical Advisory Committee, CGIAR
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
ORSTOM	Institut Français de Recherche Scientifique pour le Developpement en Cooperation
SDC	Swiss Development Cooperation
SSA	Sub-Saharan Africa
UK ODA	Overseas Development Administration, United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
US	United States
USAID	United States Agency for International Development
WANA	West Asia and North Africa
WIRFS	Women in Rice Farming Systems, IRRI
$	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

SINCE 1974 IPGRI HAS SUPPORTED GROUND-BREAKING RESEARCH TO IMPROVE CONSERVATION TECHNOLOGIES FOR PLANT GENETIC RESOURCES AND TO DEVELOP STANDARDS FOR STORAGE, MONITORING, AND MANAGEMENT THAT ARE USED IN GENEBANKS ALL OVER THE WORLD.

IPGRI Photo

About the CGIAR

AN OVERVIEW

The Consultative Group on International Agricultural Research is an informal association of fifty-two public and private sector members, from the South and North, whose mission is to contribute through research to sustainable agriculture for food security in developing countries. FAO, UNDP, UNEP, and the World Bank are the CGIAR's four cosponsors.

The vision of the CGIAR is for its research to have a positive impact on food security, income and employment generation, and 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 through the formulation and implementation of a research agenda, carried out by a network of sixteen international agricultural research centers, whose work it supports. 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—membership in the CGIAR has increased and the research supported by the CGIAR has expanded and diversified.

Today, 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.

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, advanced research institutes, non-governmental organizations, farmer associations, community organizations, and the private sector.

Membership in the CGIAR is open to any country, foundation, and 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) of its choice. The bulk of the contributions are in support of the agreed research agenda. 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 objectivies;
- have acceptable probabilities of success; and
- have no alternative producers or sources of supply with suitable costs or reliability.

RESEARCH AND ITS IMPACT

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. At its founding, the CGIAR decided that its activities would be based on "technical as well as on ecological, economic, and social factors." Thus, the research agenda of the CGIAR has changed over time, as knowledge about the dynamics of development has sharpened, and the demands on agricultural research have grown more complex.

The research agenda of the CGIAR system is recommended annually to the membership by TAC, based on proposals from the centers. When endorsed by the Group, the research agenda becomes eligible for financing by CGIAR members.

Research programs carried out by individual centers or through systemwide initiatives include: biological research to increase yields through genetic improvement and resistance to pests and diseases; integrated pest management programs and biological control methods that save crops

from destruction, while at the same time enabling farmers to reduce the use of pesticides; genetic resources conservation and classification; programs for sustainable natural resources management, such as soil and water and tropical forests; policy studies; and institution building to strengthen NARS.

The continuing transformation in tropical agriculture brought about by the CGIAR system and its partners 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 of 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.

Increased productivity has preserved land and biodiversity. By being able to feed many more people from each hectare of land suitable for high-yield agricultural production, many hectares of environmentally sensitive land have been conserved, and their biodiversity protected.

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. Last year, 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, water logging, 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 over the next twenty years on five major research thrusts:

Improving Productivity. The CGIAR strives to make developing country agriculture more productive through genetic improvements in plants, live-

stock, 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 any 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 strengthening national agricultural research in developing countries through working relationships with colleagues in national programs, strengthening skills in research administration and management, and formal training programs for research staff.

Revitalized by its program of renewal, the CGIAR looks to the future with greater openness and solidarity with its partners than ever before. The CGIAR is today a fully South-North enterprise committed to working with its many partners in the global agricultural research system to make lasting improvements in the lives of the world's poor and disadvantaged.

The CGIAR's ability to combine knowledge about the needs of farmers and the environment in developing countries with knowledge of the opportunities to be gained through advances in science, as well as its non-political character, will be critical factors for the successful development of new technologies to help the poor. Together with its partners, the CGIAR seeks to fulfill a vision in which sustainable agriculture, food security, poverty alleviation, and protection of the environment in developing countries are everyday realities.