



A Partnership for Research and Development Canada and the CGIAR



Canada–CGIAR Partnership

Canada is a founding member of the Consultative Group on International Agricultural Research (CGIAR), enjoying a long and fruitful partnership and providing the CGIAR with strong intellectual leadership, research direction, policy, and financial support. Canada is among the top five investors in CGIAR.


Canada's development assistance supports sustainable development activities to reduce poverty and contribute to a more secure, equitable and prosperous world, a theme highlighted at the 2002 Kananaskis Summit. Canada's priority areas for agriculture — strengthening national capacities; creating and using traditional and new knowledge for development; enhancing food security, agricultural productivity, and incomes; promoting agricultural sustainability and improved natural resource management, and developing well-functioning markets — match those of the CGIAR. In 2003, Canada made a strong push for boosting agricultural research in Africa through New Partnership for Africa's Development (NEPAD), and it announced a more than doubling of its core support to CGIAR.

CGIAR's partners are the Canadian International Development Agency (CIDA) and the International Development Research Centre (IDRC).

Canadian scientists, development specialists, and policymakers have played leadership roles in CGIAR affairs, identifying new opportunities, and participating in the reform program designed to enhance effective-

ness and impact and strengthen partnerships.

Canada was instrumental in conceptualizing and founding two CGIAR Centers: the Kenya-based World Agroforestry Centre (previously International Centre for Research in Agroforestry (ICRAF)), and the Syria-based



“Our response to the challenge of international development will show whether we understand the implications of interdependence or whether we prefer to delude ourselves that the poverty and deprivation of the great majority of mankind can be ignored without tragic consequences for all.”

— Lester Pearson
former Prime Minister of Canada and
Nobel Peace Laureate

International Center for Agricultural Research in Dry Areas (ICARDA). The term “agroforestry” was coined by John Bene of IDRC.

A snapshot of the partnership in 2003 shows Canadian scientists leading the Colombia-based International Center for Tropical Agriculture (CIAT) and the Peru-based International Potato Center (CIP); ten Canadians serve on the Boards of CGIAR Centers, including four at the chairman level. There has been strong collaboration between CGIAR Centers and leading Canadian universities (Guelph, McGill, Ottawa, Quebec, and Western Ontario); the CGIAR-Canada Linkage Fund (CCLF) established by CIDA in 1995 is sustaining and expanding these partnerships.

The following are examples of the Canada–CGIAR partnership’s development impacts:

- Beans are grown on 3.5 million hectares in Africa, and are a primary source of protein for millions of poor people. In Rwanda, 95 percent of farmers grow beans which provide one-third of total calories and 65 percent of protein in Rwandan diets. CIAT, in partnership with others, is leading the Pan Africa Bean Research Alliance for improving yields and nutritional value of beans, benefiting farmers many of whom are women. In Rwanda, more than 40 percent of Rwandan families are growing new bean varieties (www.ciat.cgiar.org).
- Maize provides 30 percent of the calories in diets in eastern Africa, 50 percent in southern Africa, and about 15 percent in west Africa. Wheat is the most widely-grown cereal grain. The “Eastern Africa Cereals Program” is increasing maize and wheat productivity, while strengthening national scientific capacities (e.g. through the Eastern and Central Africa Maize and Wheat Research Network). In Sub-Saharan Africa, more than half of all modern varieties of wheat and maize were developed in a CGIAR program (www.cimmyt.org).
- ICARDA, in collaboration with Food and Agriculture Organization, is assisting in rehabilitating agriculture in Afghanistan. War, civil strife, and drought have depleted food production capabilities. In partnership with others, the largest seed supply effort has been launched and 53 tons of foundation seed has been distributed to Afghan farmers (www.icarda.org).
- Deforestation and infertile soils are major problems affecting African agriculture. During the decade of the 1980s and 1990s, about 15.4 million hectares, an area the size of Uganda, was adversely affected. In Kenya’s Embu district, 3,000 farmers are planting tree legumes in fodder banks for use as an inexpensive protein supplement for dairy cows. In Zambia, over 10,000 farmers are using short-rotation improved fallows to restore soil fertility. In Philippines, World Agroforestry Centre is promoting “Landcare” approaches for disseminating agroforestry practices and catalyzing community action (www.worldagroforestrycentre.org).
- Malaria is one of the leading causes of illness in developing countries, with 2.5 billion people worldwide at risk. Most of the 3,000 deaths each day — 10 new cases every second — are in Africa. The CGIAR Systemwide Initiative on Malaria in Agriculture (SIMA) is working to stop the disease at its source: stagnant pools of water common in irrigated agriculture where mosquitoes thrive. Led by IWMI, seven CGIAR Centers are participating in this effort, which is linked to IDRC’s “Ecosystem Approaches to Human Health” program (www.iwmi.cgiar.org/sima/).





***Nourishing
the Future
through
Scientific
Excellence***

The Consultative Group on International Agricultural Research (CGIAR)

CGIAR is a strategic alliance of countries, international and regional organizations, and private foundations supporting 16 international agricultural research Centers that work with national agricultural research systems, the private sector and civil society. The alliance mobilizes agricultural science to reduce poverty, foster human well-being, promote agricultural growth, and protect the environment.

Agriculture, the key to development

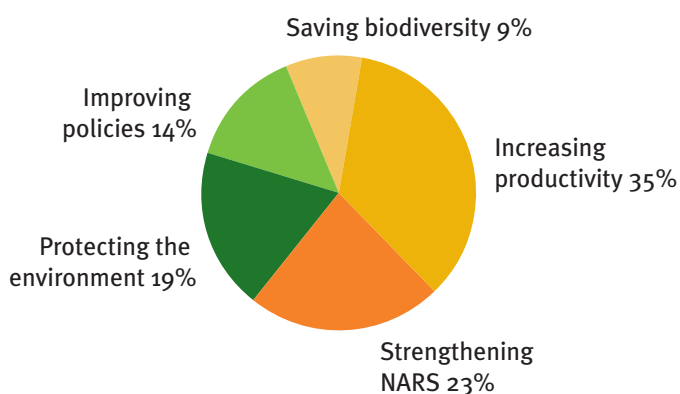
In a world where 75 percent of poor people depend on agriculture to survive, poverty cannot be reduced without investment in agriculture. Many of the countries with the strongest agricultural sectors have a record of sustained investment in agricultural science and technology. The evidence is clear, research for development generates agricultural growth and reduces poverty.

Agricultural research benefits people and the planet

Agricultural research for development has a record of delivering results. The science that made possible the Green Revolution of the 1960s and 1970s was largely the work of CGIAR Centers and their national agricultural research partners. The scientists' work not only increased incomes for small farmers, it enabled the preservation of millions of hectares of forest and grasslands, conserving biodiversity and reducing carbon releases into the atmosphere. CGIAR's research agenda is dynamic, flexible, and responsive to emerging development challenges. The research portfolio has evolved from the original focus on increasing productivity in individual critical food crops. Today's approach recognizes that biodiversity and environment research are also key components in the drive to enhance sustainable agricultural productivity. Our belief in the fundamentals remains as strong as ever: agricultural growth and increased farm productivity in developing countries creates wealth, reduces poverty and hunger and protects the environment.



CGIAR Priority Investments 2002



Agricultural research is delivering results

The CGIAR's more recent outstanding achievements include

- Quality Protein Maize, a more nutritious type of maize bred for improved human health. QPM is being planted on one million hectares in 20 countries
- New Rices for Africa (NERICAs) are transforming agriculture in the humid West Africa region. In 2002, NERICAs were planted on 14,000 hectares in Guinea and western Cote d'Ivoire, and their use is spreading across Africa. In Guinea alone, NERICAs have saved an estimated \$13 million in rice import bills
- Rehabilitating Afghanistan's agriculture; a major seed supply and distribution program has been implemented, and technical assistance is being provided to rebuild agriculture devastated by years of war, strife, and drought
- Integrated aquaculture/agriculture techniques resulting in increased rice and fish production in Asia through new strains of tilapia that grow 60 percent faster
- Training over 75,000 developing country scientists and researchers
- Reducing pesticide use in developing countries by promoting integrated pest management and biological control methods
- Adoption of zero or low-till farming practices in Africa and Asia, minimizing soil erosion and boosting farm incomes and productivity
- Enabling African producers to exploit international pigeonpea markets
- Agroforestry initiatives developed with community organizations in Asia and Africa
- CGIAR researchers have won the World Food Prize for 3 years in a row



CGIAR's Evolving Research Agenda





These successes notwithstanding, future challenges are daunting. World population is expected to reach 9 billion people by 2050. Food demand is expected to more than double in a similar time frame. Some 30 percent of irrigated lands are already degraded, and water use is expected to increase by 50 percent over the next 30 years. Science-based solutions for sustaining productivity increases while protecting ecosystems are key to addressing these challenges.

Increasing sustainable productivity, strengthening science-for-development partnerships, protecting the environment

The CGIAR was created in 1971. Today more than 8,500 CGIAR scientists and staff are working in over 100 countries. CGIAR research addresses every critical component of the agricultural sector including — agroforestry, biodiversity, food, forage and tree crops, pro-environment farming techniques, fisheries, forestry, livestock, food policies and agricultural research services. Thirteen of 16 Centers are headquartered in developing countries. Africa continues to be a priority for CGIAR research. CGIAR research partnerships help achieve the Millennium Development Goals and support major international conventions (Biodiversity, Climate Change, and Desertification). The knowledge generated by the CGIAR is available to all.



The CGIAR has five areas of focus

- Increasing productivity (of crops, livestock, fisheries, forests and the natural resource base)
- Strengthening national systems (through joint research, policy support, training and knowledge-sharing)
- Protecting the environment (by developing new technologies that make more prudent use of land, water, and nutrients and help reduce agriculture's adverse impacts on ecosystems)
- Saving biodiversity (collecting, characterizing and conserving genetic resources - the CGIAR holds in public trust one of the world's largest seed collections freely available to all)
- Improving policies (with a major impact on agriculture, food, health, the spread of new technologies and the management and conservation of natural resources)

A Twenty-first Century Alliance

Major reforms designed to strengthen science, extend the alliance, streamline governance and maximize impact are gaining ground and yielding benefits. The innovative Challenge Program initiative is designed to address global and regional issues of critical importance such as combating micronutrient deficiencies that affect more than three billion people and addressing water scarcity by improving water use efficiency in agriculture. Challenge Programs are facilitating collaborative research and helping mobilize knowledge, technology and resources.

The CGIAR alliance is open to all countries and organizations sharing a commitment to a common research agenda and willing to invest financial support, and human and technical resources. In 2002, four new members joined the alliance and membership is poised to grow further.

CGIAR members contributed US\$346 million in 2002, the single-largest public goods investment in mobilizing science for the benefit of poor farming communities worldwide.



Research is a Collaborative Enterprise

The CGIAR's achievements would not be possible without the support and commitment of the 62 members and many hundreds of partner organizations who together form the growing CGIAR alliance.

CGIAR Members

African Development Bank	Indonesia	Pakistan
Arab Fund for Economic and Social Development	Inter-American Development Bank	Peru
Asian Development Bank	International Development Research Centre	Philippines
Australia	International Fund for Agricultural Development	Portugal
Austria	Islamic Republic of Iran	Rockefeller Foundation
Bangladesh	Ireland	Romania
Belgium	Israel	Russian Federation
Brazil	Italy	South Africa
Canada	Japan	Spain
China	Kellogg Foundation	Sweden
Colombia	Kenya	Switzerland
Commission of the European Community	Republic of Korea	Syngenta Foundation for Sustainable Agriculture
Côte d'Ivoire	Luxembourg	Syrian Arab Republic
Denmark	Malaysia	Thailand
Arab Republic of Egypt	Mexico	Uganda
Finland	Morocco	United Kingdom
Food and Agriculture Organization of the United Nations	Netherlands	United Nations Development Programme
Ford Foundation	New Zealand	United Nations Environment Programme
France	Nigeria	United States of America
Germany	Norway	World Bank
India	OPEC Fund for International Development	





CGIAR-supported Centers

International Center for Tropical Agriculture (CIAT)
www.ciat.cgiar.org

Center for International Forestry Research (CIFOR)
www.cifor.org

International Maize and Wheat Improvement Center (CIMMYT)
www.cimmyt.org

International Potato Center (CIP)
www.cipotato.org

International Center for Agricultural Research in the Dry Areas (ICARDA)
www.icarda.org

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
www.icrisat.org

International Food Policy Research Institute (IFPRI)
www.ifpri.org

International Institute of Tropical Agriculture (IITA)
www.iita.org

International Livestock Research Institute (ILRI)
www.cgiar.org/ilri

International Plant Genetic Resources Institute (IPGRI)
www.ipgri.org

International Rice Research Institute (IRRI)
www.irri.org

International Service for National Agricultural Research (ISNAR)
www.isnar.cgiar.org

International Water Management Institute (IWMI)
www.iwmi.cgiar.org

West Africa Rice Development Association– The Africa Rice Center (WARDA)
www.warda.org

World Agroforestry Centre (ICRAF)
www.worldagroforestrycentre.org

WorldFish Center
www.worldfishcenter.org



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