

Multilateral program

Expenditure in 2002–03	\$9 827 219
Expenditure in 2001–02	\$10 460 768
Expenditure in 2000–01	\$11 030 561
Proportion of total ACIAR expenditure 2002–03	19.7%

The program's goal is to ensure the effectiveness of, and benefits to, developing countries and Australia from agricultural research conducted by the international agricultural research system with funds provided by Australia.

Program progress

ACIAR administers Australia's contribution to the internationally funded autonomous non-profit International Agricultural Research Centres (IARCs). The 19 IARCs carry out research and related activities to achieve sustainable food security and reduce poverty in developing countries through scientific research-related activities in the fields of agriculture, forestry, fisheries, policy and environment.

ACIAR operated its IARC contributions under new policy positions for the first time in 2002–03, after a major internal review of the multilateral program. The policy involves:

- allocating about 20 per cent of ACIAR's total appropriation to the IARCs;
- allocating between one-third and half of ACIAR's annual IARC investment as project-specific funding (an increase from pre-review conditions); and
- focusing its unrestricted (non-project specific) funds on a reduced number of Centres.

Disbursement of multilateral funds, 2002–03

ACIAR allocated \$9.827 million to the multilateral program this year, representing nearly 20 per cent of total appropriation.

In 2002–03, unrestricted contributions to IARCs amounted to 56 per cent and project-specific funding to 43 per cent of total research funding. The remaining 1 per cent was spent on other multilateral activities. Fifteen IARCs received funding, 13 of which received core (untied) funding. Allocations are based on the comparative advantage of individual IARCs to deliver research applicable to Australia's regional priorities. Five of the 13 centres receiving core funding are located in the Asia-Pacific region and another six have a mandate that covers staple crops in that region. The remaining two, CAB International (CABI) and IFPRI, are responsible for research information systems and food policy.

All 15 funded centres received project-specific funding through ACIAR this year. Fourteen of the centres are associated with the Consultative



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Heather Crompton oversees the Multilateral Program

Group on International Agricultural Research (CGIAR), while one works in an area of agricultural development of particular interest to Australia.

Project-specific funding aims to build tripartite research linkages involving IARCs, advanced research institutions in Australia and national agricultural research institutes in developing countries, particularly those that are ACIAR bilateral partners. Project-specific funding supports projects that are developed and managed by ACIAR's 11 discipline-based research programs. In this way, the project-specific funding complements and adds value to the bilateral program. In 2002–03, five new activities were initiated and eight completed. Including these, a total of 25 projects were active in 2002–03.

Funding categories

	Expenditure	Percentage of total expenditure
Unrestricted contributions to core programs	\$5 530 000	56%
Project-specific funding linked to Australian research groups	\$4 194 262	43%
Other	\$102 957	1%
Total	\$9 827 219	100%

ACIAR provides support to relevant CGIAR systemwide initiatives (cross-centre programs that utilise research complementarities for addressing and resolving global and regional issues through strategic research approaches). Support was provided to the following initiatives:

- Technical support for regional plant genetic resources development in the Pacific
- Sustainable integrated pest management of white flies as pests and vectors of plant viruses in Asia
- Integrated nutrient management in tropical cropping systems: improved capabilities in modelling and recommendations
- Sustainable endoparasite control for small ruminants in Southeast Asia
- Fish in food: the critical role of fish in world food issues
- CGIAR agricultural science and technology indicators initiative

Regional support activities include contributions to the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the Asia-Pacific Association of Forestry Research Institutions (APAFRI).

Project examples

CIFOR, in conjunction with regional partners and networking with national and international institutions, is assisting Indonesia to assess and monitor progress and implementation of **decentralisation of forestry management** and its impact on forests and forest communities.

A joint WorldFish/IFPRI project is examining **fish supply and demand in a single framework integrated with other foods**. ACIAR funding supported post-study workshops and dissemination efforts. The research results are helping shape policy through a better understanding of key drivers of demand and supply issues for fish industries.

A two-year CABI project to initiate an **Aquaculture Compendium** has been funded. The total project will cost approximately A\$2.9 million, with funding coming from a consortium of donors, including ACIAR. CABI is also working under ACIAR support with a range of organisations in Vietnam developing disease management capacity in the country. A focus has been strengthening advisory capacity by working with farmers' advisers to provide plant disease information and advice.

The sustainable integrated management of whiteflies as pests and vectors (living transmitters) of plant viruses in Asia continues. Research is providing inputs to a global CGIAR initiative focused on a new whitefly that is a major crop disease vector.

Through an IPGRI-led project a plant genetic resources specialist has been provided for the Secretariat of the Pacific Community to aid in the **preservation of genetic resources of several important Pacific crops**, notably taro and breadfruit.

An International Crop Research Institute for the Semi-Arid Tropics-led (ICRISAT) project in India has identified several **peanut lines that have low levels of aflatoxin contamination** under conditions where there is usually a high risk of contamination.

The CIMMYT-led Seeds of Strength project in Afghanistan has imported seed for **wheat and maize** to provide for immediate production. Testing of a range of cultivars is underway to identify those most suitable for Afghan conditions.

The International Rice Research Institute (IRRI) and IWMI are collaborating with Chinese and Australian researchers on studies on **water saving for rice in China**. These have focused on improving water use efficiency to develop potential options to cope with water shortages.

The International Livestock Research Institute (ILRI), in conjunction with Australian and in-country partners, has carried out surveys of smallholder farms in the Philippines and Indonesia to determine levels of **parasite resistance in sheep and goats**. The survey has found that resistant parasites are not yet common in either industry.

An International Centre for Agricultural Research in the Dry Areas-led (ICARDA) project **collecting plant genetic resources** from the Central Asian and Caucasus republics continued with collection missions to Armenia and Tajikistan. The development, support and training of small

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Australian Agriculture*

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genetic resource units in each of the CAC republics also continues. The project is collecting valuable and endangered cereals and legumes from throughout the region, ensuring their ongoing preservation.

Molecular studies conducted by IRRI, to achieve apomixis (asexual reproduction) in **hybrid rice**, have discovered three fertilisation-independent seed (FIS) genes in *Arabidopsis thaliana*. This has allowed the isolation of related genes performing the same function in different rice varieties, for use in experiments to determine if autonomous development is possible. Transgenic lines using one of the three FIS genes are now available. Analysis of *Hieracium*, which undergoes a natural process of apomixis, was conducted in relation to the function of its FIS gene in transgenic studies. A transgenic mechanism has been found in some rice lines that may be useful in ensuring seeds capable of fertilisation-independent formation of parts of the reproductive process.

Funding to Centres for 2002–03

Acronym	Centre title and location	Core funding (\$)	Project-specific funding (\$)	Total (\$)
CABI ¹	CAB International, United Kingdom	300 000	262 003	562 003
CIAT	International Center for Tropical Agriculture, Colombia	0	55 000	55 000
CIFOR	Center for International Forestry Research, Indonesia	300 000	118 257	418 257
CIMMYT	International Maize and Wheat Improvement Center, Mexico	700 000	1 185 731 ²	1 885 731
CIP	International Potato Center, Peru	330 000	241 574	571 574
ICARDA	International Center for Agricultural Research in Dry Areas, Syria	250 000	305 250	555 250
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics, India	550 000	131 754	681 754
IFPRI	International Food Policy Research Institute, United States of America	450 000	150 000	600 000
IITA	International Institute for Tropical Agriculture, Nigeria	0	111 619	111 619
ILRI	International Livestock Research Institute, Kenya	300,000	106 150	406 150
IPGRI	International Plant Genetic Resources Institute, Italy	300 000	339 195	639 195
IRRI	International Rice Research Institute, Philippines	850 000	195 917	1 045 917
IWMI	International Water Management Institute, Sri Lanka	500 000	241 014	741 014
World Agroforestry Center	World Agroforestry Centre (formerly International Centre for Research in Agroforestry), Kenya	250 000	436 277	686 277
WorldFish Center	WorldFish Center (formerly International Center for Living Aquatic Resources Management), Malaysia	450 000	314 521	764 521
Total funds to IARCs		5 530 000	4 194 262	9 724 262

¹ Centre not associated with the CGIAR.

² Includes funding from AusAID, provided through ACIAR.

CGIAR at a glance: mobilising agricultural science

The CGIAR is a strategic alliance of countries, international and regional organisations, and private foundations supporting 16 international agricultural research centres that work with national agricultural research systems, the private sector and civil society. The alliance mobilises agricultural science to reduce poverty, foster human wellbeing, promote agricultural growth, and protect the environment.

Five focus areas

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 the adverse impacts of agriculture on ecosystems

Saving biodiversity by collecting, characterising and conserving genetic resources (the CGIAR holds in public trust some of the world's largest seed collections, which are freely available to all)

Improving policies that affect agriculture, food, health, the spread of new technologies, and the management and conservation of natural resources

Some features

ACIAR provides annual funding of:

- > \$A5M to 13 CGIAR Centres, untied
- > \$A4M pa in project specific funding

CGIAR staff:

- 8000 scientist and other staff
- > 1000 internationally recruited staff
- > 6500 support staff

CGIAR funding:

- \$US357M in 2002:
 - of which 42% is untied
 - compared with 61% in 1998 when funding was \$US338M



The latest evaluation of the CGIAR completed by the World Bank in early 2003