

Vital allies in achieving objectives

ACIAR's relations with its international research partners

The International Agricultural Research Centres (IARCs) of the Consultative Group for International Agricultural Research (CGIAR) have been vital partners in many of the rehabilitation projects undertaken by ACIAR. Their role, however, extends well beyond these projects.

ACIAR allocates around \$10 million a year (around 20 per cent of its budget) to supporting activities of the IARCs. This support takes two forms:

- as unrestricted funding to support core activities of centres with a comparative research advantage relating to the Asia-Pacific region; and
- as project-specific funding targeting a particular problem or set of problems relevant to an ACIAR partner country.

Projects are led by a selected IARC where that centre has a comparative research advantage relating to the particular research and development issue.

Linkages between IARC scientists and their counterparts in Australia and developing country partners are central to the design of projects. Many allow developing country scientists to access valuable training and experience, particularly where this has not been possible prior to the project.

By involving developing country agricultural research institutions, and linking these to IARCs, projects deliver both applicable results and build scientific capacity, creating home-grown and home-owned solutions.

ACIAR has been responsible for administering the Australian Government's contribution to the

IARCs since 1992. This includes allocations to CGIAR-aligned and non-aligned centres.

The Australian Government has contributed to these centres for more than two decades. Australia also contributes each year to a range of multilateral organisations: international development banks, United Nations development organisations, international health programs and international environment programs.

ACIAR's A\$10 million investment in the CGIAR and other IARCs is small compared to many countries. To ensure the effectiveness of this investment, decisions on funding are made against:

- the relevance of the centre's mandate in the Asia-Pacific region;
- the objectives of Australia's aid program; and
- the comparative research advantages applicable to Australia's regional priorities, either through the centre's location in the Asia-Pacific region, or a mandate covering a crop or crops, livestock or fisheries that are staple foods in the region.

Joint ACIAR-IARC projects range from investments in long-term research into issues such as apomixis in rice, to identifying suitable crop varieties for on-the-ground dissemination.

ACIAR is supporting a sustained research effort, led by the International Rice Research Institute, to develop apomictic hybrid rice. This allows new high-yielding hybrids to be reproduced asexually, overcoming the high cost and inflexibility of hybrid seed production.

Apomixis is the naturally occurring ability of some plant species to reproduce asexually through

seeds, which leads to inheritance of genes exclusively from the mother; plants growing from these seeds are identical to the mother plant.

Molecular studies 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.

The implications of World Trade Organization (WTO) accession and trade liberalisation on agricultural policy has been addressed through projects involving the International Food Policy Research Institute. One project is examining the ramifications of WTO accession on China's rural poor, helping develop appropriate policy options.

Other projects are examining implications on a broader-economic scale, specifically to assess agricultural policies and levels of protection or disprotection for selected developing countries. This has increased knowledge about policies that have caused protection and disprotection of agriculture in India and China, and have been widely disseminated, including to the United Nations Food and Agriculture Organisation.

The impact of sanitary and phytosanitary measures on the ability of (agricultural exporting) developing countries to achieve the full benefits of trade liberalisation is also being addressed.

Further information can be found on the ACIAR website under the Multilateral program.



High-yielding rice hybrids are strengthening food security and economic stability for village communities.