

# Rebuilding Agriculture in East Timor



Towards food  
security for  
a better life

Australian  
agricultural expertise  
is helping to rebuild  
the East Timorese  
agriculture sector,  
through a suite of  
Australian Centre for  
International  
Agricultural  
Research Centre  
projects

The **Australian Centre for International Agricultural Research (ACIAR)** is an Australian Government statutory authority that operates as part of Australia's Development Assistance Program within the portfolio of Foreign Affairs and Trade. It assists and encourages Australia's agricultural scientists to use their skills for the benefit of developing countries as well as Australia to achieve the objectives of Australia's Aid Program of advancing Australia's national interest through poverty alleviation and sustainable development.

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**More than 80 per cent of East Timor's population of almost 1 million people rely on agriculture for food and livelihoods. ACIAR is working to introduce better staple crop varieties to boost food security and restore agricultural expertise and research infrastructure through four projects, two improving staple crops, one controlling weeds and one rebuilding agricultural expertise**

East Timor gained independence in 1999, but has struggled to produce sufficient food and is a net food importer. Agricultural expertise was very limited and research infrastructure severely damaged following independence.

Agriculture in East Timor was dominated by crop varieties of local origin or those available in Indonesia. Most of these varieties were not well suited to local growing conditions. Yields generally are much lower than in comparative regions elsewhere.

The climate is semi-arid with distinct wet and dry seasons. There are six major agro-ecological zones. The staple crops grown are:

- Sweet potato
- Maize
- Rice
- Peanut
- Cassava

ACIAR has played a key role in helping East Timor re-establish its agriculture sector, through two projects aimed at:

- introducing improved varieties of staple food crops, and
- re-building infrastructure and developing expertise to support agricultural research

**Improved crop varieties have been introduced** through the Seeds of Life project. This has tested and distributed improved germplasm of the five major food crops to farmers.

Working with a wide range of national and international organisations rice, maize, cassava, beans (including red beans, soybean, mungbean, and cowpea), potato, sweet potato and peanut were evaluated under a range of soils types and climatic conditions.

These introduced varieties of rice, maize, sweet potato and peanut, in particular, appear well adapted to local conditions, have tolerance or resistance to pests and diseases (biotic stresses) and have demonstrated a sufficient level of tolerance to

drought and soil (abiotic) stresses. Many of the suitable varieties are being tested in farmer participatory research and some will be recommended to the Ministry of Agriculture, Forestry and Fisheries, for scaling up and distribution.

Wider scale bulking up of seed of these varieties will be undertaken in the follow-on project to Seeds of Life.

### **Rebuilding Agricultural Capacity**

The resource and human capital base of the National University of East Timor was devastated following independence.

To aid rehabilitation of the University, ACIAR is supporting **the re-establishment of the Faculty of Agriculture** through a 'twinning arrangement' with faculties from selected Australian universities.

The suite of activities supported includes:

- training for staff of the new faculty;
- assistance with agriculture curriculum design;
- rehabilitation of the University experimental farm;
- re-development of an agriculture library collection, and
- assistance with information technology requirements.

A new agriculture curriculum equipping students to identify and solve problems in a farming systems context has been developed. This new approach has focused on applied on-farm research. In 2003 90 graduate awards were conferred.

The laboratory at the Hera Field Station has been restored to provide a basic facility for practical sessions for science students. This facility is the only working agricultural laboratory in East Timor.

More than 500 people throughout the country, many former resistance fighters, have been trained by senior animal science students in aspects of livestock husbandry.

Visit [www.aciar.gov.au/web.nsf/country/East%20Timor?opendocument](http://www.aciar.gov.au/web.nsf/country/East%20Timor?opendocument) for more information on ACIAR's Program in East Timor

### **Managing weeds**

*Chromolaena odorata* is a major invasive weed which is toxic to livestock. In East Timor it has invaded pastures, crop gardens and other areas, causing significant livestock losses.

ACIAR-supported research has already identified and successfully introduced biological control agents against *Chromolaena* in PNG and Indonesia.

These controls have significantly reduced weed populations in the two countries. The same **bio-control agents will be introduced into East Timor**.

### **Improving Cassava**

Cassava is an important food crop, providing valuable calories for poor people in Indonesia and East Timor. Yields, however are low in Indonesia (13 t/ha) and particularly East Timor (4 t/ha). Expanding on work conducted in the Seeds of Life project, with testing of varieties underway.

New **varieties have yielded between 40-100 t/ha in research trials**, but these have yet to be adopted in farmers' fields.

The main barrier to farmer adoption is poor linkages between research and extension organisations. A new project is addressing this through farmer participatory research and extension to promote new varieties as well as improved production technologies.

### **Further information**

For further information visit the ACIAR website at: [www.aciar.gov.au](http://www.aciar.gov.au)

Information on ACIAR's program of activities can also be found in the following publications available through ACIAR's website:

- *Annual Operational Plan 2005–06*
- *Annual Report 2004–05*
- *Proceedings 113 - Agriculture: New directions for a new nation East Timor (Timor-Leste)*