Most of the world’s poorest people live in rural areas. That simple demographic means that improvements to farming capacity can act as a lever to lift agricultural economies and pull people out of poverty.

ACIAR plays a specialist role providing agricultural R&D solutions to some of the world’s poorest farmers. To ensure these R&D solutions are delivering sustainable outcomes, the Centre commissions independent impact assessment studies that seek to measure and better understand the benefits realised through this work.

To date, impact assessment studies of 90 projects have demonstrated total benefits of a massive $6.6 billion. In other words, for every $1 spent by ACIAR, $30 worth of benefits are delivered to farmers and economies in partner countries and Australia.

Benefits flow from fruit-fly R&D

As a major pest of fruit and vegetable crops, fruit flies are a significant threat to food security and have been targeted in no fewer than 17 ACIAR projects, spanning 25 years. In total, ACIAR–Asian partnerships have invested $51 million towards fruit fly R&D, with ACIAR contributing nearly $23 million.

This long-term investment in pest identification and management provides an ideal opportunity to ask a question fundamental to policy responses in the global food crisis: what are the impacts associated with investing in the production systems and supply chains of smallholder farmers?

The impacts of this ACIAR-supported fruit fly R&D was recently analysed by Bob Lindner and Paul McLeod, from the University of Western Australia. Working independently of ACIAR, they identified the measurable estimated impacts across a range of areas including:

- improved market access for exports;
new postharvest treatments for export market access;
- improved biosecurity and reduced risk of pest incursion;
- new field-control measures using a protein bait and spray;
- yield gains;
- new fruit crops for some areas;
- environmental and human health benefits; and
- capacity building through formal training and extension programs.

Overall, the $51 million investment in fruit-fly R&D returned benefits with a present value of $259 million. That means a return of about $5 for every $1 invested and a remarkable internal rate of return of 33%.

Australia also benefited from the fruit-fly research, with the analysts identifying $43.3 million worth of biosecurity benefits arising from the use of ACIAR-sponsored innovations in response to exotic fruit fly incursions in Australia during the 1990s.

Biosecurity and market access benefits were significant too for countries such as Tonga, where ACIAR-supported fruit-fly surveillance measures made it possible to negotiate a bilateral quarantine agreement with Japan to export fresh ‘Kabocha’ squash. This export market has been described as the mainstay of the Tongan economy.

**CAPACITY BUILDING IMPORTANT**

ACIAR CEO Peter Core says that what often proves crucial in the high rate of return on ACIAR-funded work is the commitment to capacity building, especially through follow-up activities and an emphasis on extension and training. These factors contribute to a rate of returns that tends to increase substantially over time, well after completion of the research activity.

For instance, the 2008 update on estimates previously done in 2001 on pig breeding and feeding projects in Vietnam: total benefits increased from a net present value of nearly $500 million to nearly $2 billion, providing an updated benefit-to-cost return of more than 250:1 and an internal rate of return of 74%.

“Capacity building included is an important component of the original project has been crucial in sustaining and extending the impact of the research,” Mr Core says.

“Without the enhanced skills of the research team, the productivity gains for the pig industry would have diminished soon after the project was completed.”

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**NEW IMPACT ASSESSMENTS**

Recent publications in the Impact Assessment Series (IAS) examine fruit-fly R&D, pig breeding and feeding projects in Vietnam, Indian cattle productivity and peanut-cropping systems projects, fisheries-related projects in Indonesia, and increasing production of goats in the Philippines through better internal parasite control.

ACIAR also published *Guidelines for assessing the impacts of ACIAR’s research activities* to provide a common approach for the assessment of its work.

In 2008-09, ACIAR expects to release a further five IAS reports.

In addition to its annual program of independent impact assessments, ACIAR published adoption studies of research outcomes for all projects three years after their completion. During 2008-09 ACIAR will publish adoption studies for projects concluded in 2003-04.