

# ROUNDUP

## ACIAR initiates two projects in Iraq

After two decades of limited access to international developments in agriculture, Iraqi scientists are being brought up to speed



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**A**CIAR's first two projects in Iraq have begun. Two problems are being addressed: the first, to improve wheat, barley and pulse and forage crops in the country's north; the second, research to improve pest management in the citrus/date system of central Iraq.

Over the past two decades, Iraqi scientists have had limited access to international developments in the agricultural sector. Bringing these scientists up to speed on issues relating to crop improvement and management and pest control will be of aid both in the projects and also in broader agricultural

applications. Training courses will be undertaken outside Iraq.

A lack of international access has also resulted in crop varieties planted in Iraq being those sourced in the 1980s. Since that time, crops and management techniques used in Iraq have not changed, despite significant advances elsewhere. More appropriate modern varieties, coupled with the adaptation of improved management practices, including tillage, fertiliser and weed control, are needed.

The crop germplasm project will work to identify and introduce suitable varieties. Low rainfall necessitates seed varieties well suited to the dry

climate and tolerant of, or resistant to, salinity, drought and diseases.

The International Center for Agricultural Research in the Dry Areas (ICARDA) has an extensive collection of suitable germplasm possessing disease and stress tolerance and resistance characteristics to match cropping conditions found in Iraq. Germplasm from the ICARDA collection will be trialled for its suitability.

To support the introduction of these varieties, management techniques will also be identified. Current yields of crops are only about a third of those grown under similar conditions in other



The pace of agricultural production in Iraq is soon to increase through ACIAR-assisted research.

countries, reflecting just how far behind almost two decades of isolation has left Iraq.

The introduction of improved cereal varieties, including high-protein legumes, could also result in improved dietary intake, both for humans and animals.

Jasmine whitefly is a major agricultural pest of citrus in Iraq, but unlike for other pests, effective controls are not available. Citrus trees are planted below date palm plantations, of which dobas bugs are the main pest.

The pest management practices for dobas bugs target the canopy of date trees, above citrus trees,

and in doing so kill natural enemies of jasmine whitefly, but not the fly itself. This spraying exacerbates jasmine whitefly problems, resulting in yields of around 30 per cent of what should be achieved.

In the second project, Australian scientists will initially assist Iraqi senior scientists to develop a National Strategy Plan for the control of jasmine whitefly affecting citrus production in central Iraq. Integrated pest management, utilising the latest research and aimed at controlling both whitefly and dobas bugs, should substantially boost production. Training in Australia of junior scientists in integrated pest management practices will enable

them to implement the newly developed plan upon return to Iraq.

A successful implementation could add up to A\$100 million a year in productivity gains for the citrus/date system.

The projects have been shaped to match Australian expertise to Iraqi conditions and priorities and by the constraint of limited access to Iraq by Australian scientists.

Both projects are co-funded by AusAID and ACIAR and managed by ACIAR, and are being implemented by ICARDA and Australian research organisations.

# ROUNDUP

## New appointments

### Jeff Davis

Jeff Davis has joined ACIAR as Program Manager for Policy Linkages and Impact Assessment. The program is responsible for monitoring, evaluating and assessing the impact of ACIAR-funded research. It also works to improve interdisciplinary linkages between economic and biophysical research and development activities.

Dr Davis is returning to ACIAR after a nine-year period with the Rural Industries Research and Development Corporation. During that time he was General Manager for Research (Establishment Industries). Before that he was coordinator of ACIAR's Economic Evaluation Unit. Dr Davis undertook a PhD at the University of Minnesota in the US as a Fullbright Postgraduate Study Award recipient in 1979. He previously completed a Bachelor of Agricultural Economics (Honours) at the University of New England and Master of Economics (Honours) at Macquarie University.

Dr Davis has worked at the Industries Assistance Commission, NSW Agriculture and the ANU, as well as undertaking consulting and lecturing positions.



### John Cullen

John Cullen is ACIAR's Research Program Manager for Crop Improvement and Management. The CIM program works to deliver improved crop varieties through germplasm conservation, plant improvement and better crop management.

Mr Cullen has a Bachelor of Science from University College, Dublin, and a Master of Science from Trinity College, Dublin. He began his career as a research assistant at UCD before joining an international pharmaceutical company in Ireland. In 1988, he migrated to Australia and worked at the Australian National University's ANUTech as a technology transfer officer, liaising with industry, academia and government. He was Manager of Commercial Research at Griffith University before joining the Grains Research and Development Corporation as Program Manager for Crop Improvement. He joins ACIAR after 10 years at the GRDC.



### Peter Rolfe

Peter Rolfe is Research Program Manager for Animal Health. The Animal Health program is responsible for identifying investment opportunities in animal health and food safety research. Dr Rolfe has a Bachelor of Veterinary Science (Honours) and a PhD from the University of Sydney. He has worked at the University's Rural Teaching Clinic and in NSW Agriculture as a veterinary officer at Grafton, NSW, advising local beef, dairy cattle and poultry industries on animal health matters. After his PhD studies in animal parasitology, Dr Rolfe led the parasitology research team at the Elizabeth Macarthur Agricultural Institute, NSW Agriculture. In that time he has also consulted to a number of aid projects in China and Indonesia. Dr Rolfe also managed the Yeerongpilly Veterinary Laboratory (QDPI) and later was Animal Health Program Manager for Meat and Livestock Australia, where he was responsible for investment in animal health research on behalf of the red meat industry. Prior to joining ACIAR, Peter was a Global Project Team Leader for Pfizer Animal Health.



## NEW PROJECTS

- ADP/2004/045 Exploring alternative futures for agricultural knowledge, science and technology (KST)
- ADP/2004/044 Economic analysis of technical barriers limiting agricultural trade of China
- ASEM/2004/077 Postgraduate Scholarship Scheme for UNITECH, University of Lae, Papua New Guinea
- ASEM/2004/042 Assessing and extending schemes to enhance the profitability of the PNG coffee industry via price premiums for quality
- CIM/2003/067 Ensuring productivity and food security through sustainable control of yellow rust of wheat in Asia
- CP/2005/035 Survey toolbox for plant pests – a practical manual for surveillance of agricultural crops and forests
- CP/2004/010 Building integrated pest management capacity in Iraq, initially concentrating on control of jasmine whitefly in the citrus/date system of central Iraq
- CP/2002/115 Diseases of crops in the central provinces of Vietnam: diagnosis, extension and control
- FIS/2005/025 Fisheries rehabilitation in tsunami-affected Indonesia: community needs assessment and resource status
- FIS/2002/075 Application of PCR for improved shrimp health management in the Asian region
- FIS/2002/074 Capacity development to monitor, analyse and report on Indonesian tuna fisheries
- FIS/2001/083 Inland aquaculture in Papua New Guinea: improving fingerling supply and fish nutrition for smallholder farms
- FST/2004/009 Facilitating the availability and use of improved germplasm for forestry and agroforestry in Papua New Guinea
- FST/2003/049 Review of portable sawmills in the Pacific: identifying the factors for success
- FST/1999/095 Improving the value chain for plantation-grown eucalypt sawn wood in China, Vietnam and Australia; genetics and silviculture
- LPS/2004/073 Capacity building on cattle production at Dong Giang district, Quang Nam province, Vietnam
- LPS/2002/081 Development of emerging farmer crop-livestock systems in northern Republic of South Africa
- LWR/2005/051 Development of training workshops in Indonesia for post-tsunami rehabilitation
- LWR/2005/004 Management of soil fertility for restoring cropping in tsunami-affected areas of Nanggroe Aceh Darussalam Province, Indonesia
- LWR/2003/039 Improving the management of water and nitrogen fertiliser for agricultural profitability, water quality and reduced nitrous oxide emissions in China and Australia
- LWR/2002/094 Promotion of conservation agriculture using permanent raised beds in irrigated cropping in the Hexi Corridor, Gansu, China

## Project variations

- AH/2001/005 Salinity reduction in tannery effluents in India and Australia
- ASEM/2002/014 Improved productivity and the participation of youth and women in the Papua New Guinea cocoa, coconut and oil palm industries
- ASEM/2001/037 Improving the marketing system for fresh produce of the highlands of Papua New Guinea
- CP/2000/094 Diagnosis and control of soil-borne fungal diseases of plants in Indonesia
- FIS/2003/037 Artisanal shark and ray fisheries in Eastern Indonesia and their relationships with Australian resources
- LPS/2001/077 Poultry feeding systems in Papua New Guinea
- LWR/2000/030 Growing more rice with less water: increasing water productivity in rice-based cropping systems
- SFS/2001/068 Technical support for regional plant genetic resources development in the Pacific
- SMCN2000/046 Overcoming magnesium deficiency in oil palm crops on volcanic ash soils of Papua New Guinea
- SMCN/1999/005 Improved soil management on rain-fed vertisols in Nusa Tenggara, Indonesia

# NEW PUBLICATIONS

## Monographs

### SAFER SELECTION AND USE OF PESTICIDES – INTEGRATING RISK ASSESSMENT, MONITORING AND MANAGEMENT OF PESTICIDES

This book describes a process to select safer pesticides and to improve the management of pesticide use. It addresses the need for good pesticide selection and management in Vietnam and throughout Southeast Asia.

Angus N. Crossan, Nguyen Thi Thu Trang, Pham Ngoc Ha and Ivan R. Kennedy (eds).  
ACIAR Monograph 117, 84pp, price \$15 (plus postage and handling).

## Impact Assessment Series

### REVIEW OF THE RETURNS TO ACIAR'S R&D INVESTMENT

ACIAR's Impact Assessment Series 35, authors David A. Raitzer and Robert Lindner.

## Working Papers

### SCALING OUT IMPACTS: A STUDY OF THREE METHODS FOR INTRODUCING FORAGE TECHNOLOGIES TO VILLAGES IN LAO PDR

This working paper presents the results of a study to research the effectiveness of three participatory extension methods for scaling out forage and livestock technologies to new villages in Lao PDR.

Joanne Millar, Viengxay Photakoun and John Connell. ACIAR Working Paper 58, 36pp.

The impact assessment series reports are freely available as pdf files at [www.aciar.gov.au](http://www.aciar.gov.au). ACIAR's policy is to provide complimentary copies of its publications to libraries, institutions, researchers and administrators in developing countries with an involvement in agriculture, and to any scientist involved in an ACIAR project.

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## Book Review

### REVIEW OF THE RETURNS TO ACIAR'S BILATERAL R&D INVESTMENTS

ACIAR has invested A\$1.1 billion (in real 2004 A\$) in bilateral research since starting operations in 1982. But what is the value or worth of this investment? Has ACIAR broken even or run at a loss? In an effort to answer these questions, ACIAR has undertaken a review to quantify the returns on investment.

Across three different categorisations of assessed benefits based on selected

project investments, the results show ACIAR has delivered good returns.

The most notable part of this result is that these returns are based on less than 10 per cent of ACIAR's bilateral project investment: only those projects that have been the subject of an external impact assessment were included in the review. These returns alone have been sufficient to justify the entire ACIAR bilateral investment portfolio.

ACIAR conducts impact assessments of chosen projects or suites of projects. When the Review was commissioned, 34 formal impact assessments had been completed, with 29 of these forming the basis of the analysis.

A framework to place the results of individual assessments within a realistic context of deliverable benefits was developed. Three scenarios of benefit aggregation were constructed:

- potential benefits of all ACIAR-attributed results estimated in all 29 assessments;
- plausible benefits based only on findings supported by transparent evidence of adoption of R&D project outputs; and
- substantially demonstrated outcomes that are highly certain to occur and have robust benefits.

Many of the impacts of ACIAR projects are difficult to attribute and necessarily make assumptions on the likelihood of all parts of the impact assessment being realised.

Each of these 29 assessments was critically reviewed, based on a framework of principles and criteria to score the probability of benefits. These were derived from selected analytical literature.

To estimate which of the benefits from impact assessments should be included in each scenario two principles were used, transparency and analytical rigour. Transparency is scored against assumptions made in the assessment, data sources and an explanation of data treatments. Analytical rigour relates to the data set utilised, appropriate data treatments, plausible counterfactual scenarios being developed, adequate consideration of the relevance of economic benefits and appropriate institutional attribution.

Therefore, the higher the score of the estimated benefit for each criterion, the closer the impact is to being certain to occur. Those impacts in the substantially demonstrated benefits scenario are those with the highest scores for transparency and analytical rigour.

In each scenario, benefits are divided between those already realised (through 2004) and those inclusive of future projections (through 2004 and beyond). These were then run through the three scenarios, under a real discount rate of five per cent.

Scenario	Benefits to date: benefit/cost ratio	Benefits inclusive: benefit/cost ratio
Potential benefits	1.33	3.06
Plausible benefits	1.00	1.62
Substantially demonstrated	0.84	1.31

In all but the 'substantially demonstrated' scenario, for benefits to date, the small group of projects used for the review indicates that ACIAR has matched or exceeded returns on its total bilateral investment. These estimates indicate ACIAR provides excellent returns for a development agency.

This review proves that even with the most conservative assessment of benefits, generated by only three per cent of its total research investment, ACIAR has proven its value.

As future impact assessments, and those published subsequent to this review, are released, it is expected that many new and often unanticipated benefits from past investments will become evident.

The study also demonstrates that Australia receives nearly half of its investment in ACIAR back under the potential benefits scenario, almost entirely through productivity-related benefits. Indirect benefits such as improved knowledge and enhanced institutional recognition are not included, since these cannot be readily quantified.

