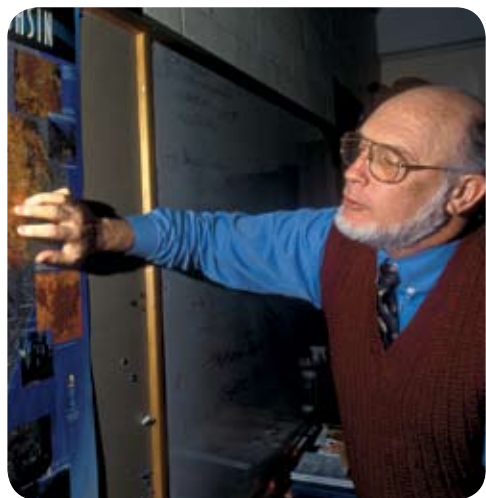


Ecosystem services not a free gift

Farmers need to manage the Australian landscape, including rivers, wetlands and estuaries, in ways that are ecologically sustainable – and city dwellers need to pay them for doing so. This was the message from Dr John Williams in his 2005 Farrer Memorial Oration. An ACIAR board member and former Chief of CSIRO Land and Water, Dr Williams was awarded the 2005 Farrer Memorial Medal for distinguished services in agricultural science in Australia.

While targeted at Australian agricultural management, his words will echo universally as farmers everywhere face production and environmental constraints caused by overworked soils that have turned saline or acidic, urban growth that is pushing them off the best soils and on to increasingly marginal country, and the spectre of global warming,



BRAD COLLIS

Dr John Williams: universal message.

In a speech titled 'Sustainable Agriculture in Australia – Some Ways Forward', Dr Williams said the agricultural community should not be expected to produce cheap, clean food and fibre, as well as provide a free service to maintain all the ecological functions of the landscape.

Dr Williams said the search for sustainable agriculture began in Australia with William Farrer, who in 1886 had suspected English wheat breeds were unsuitable because they were especially vulnerable to rust fungi. Farrer's search for varieties more suited to Australian conditions began the "long journey that farmers and scientists have trodden for the last 125 years," he said.

"It is a demanding journey to build an agriculture that works for the climate and soils of the great south land," he said. "Unfortunately farming

based around annual crops and pastures does not work well in the Australian landscape."

The problem is that annual crops and pastures leak far too much water into the ground, leading to rising salt levels in valley floors, rivers and wetlands, soil acidification, soil nutrient depletion and the delivery of increased nutrients to groundwater, streams and wetlands.

"The challenge is to build agro-ecosystems that generate wealth from food and fibre products and which have within them flows of water, nutrient and carbon that are well matched to the flows that can be accommodated in hydro-geochemical cycles of the ancient continent."

Dr Williams said there is sufficient knowledge now to shape the rethinking of our farming systems. However, to do so would require "radical change" to current land use. These changes should incorporate:

- ▶ commercially driven tree production systems for large areas of the current crop and pasture zones;
- ▶ new farming systems made up of novel mixes of annual and perennial plants;
- ▶ new cereals, pulses, oilseed and forages able to substantially reduce deep drainage and nitrogen leakage; and
- ▶ new land-assessment tools that best locate trees, other perennials, high-value annuals and native vegetation and match them to water targets and biodiversity goals. These tools should help identify land which should be farmed and those areas should be used to protect native biota.

Dr Williams said the future form of sustainable agriculture would be "a mosaic of new and old agricultural enterprises".

Forestry prize

Professor Phil Evans, director of the Centre for Advanced Wood Processing at the University of British Columbia, and a former graduate student at the centre, Dr Rico Cabangon (now with the Forest Products Research and Development Institute in the Philippines), have won the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development Prize for their work in an ACIAR project on development of high-strength, oriented, wood-wool cement composites for use in emergency shelters and affordable housing.

The work addressed impediments to the use of *Acacia mangium* as raw material for the manufacture of particle boards made of wood-cement composites. Such particle boards are known to be very

suitable for the construction of low-cost housing, and are used for this purpose in the Philippines in particular. The project developed methods that optimise processing conditions for the production of composite boards from cement and wood of acacias, in particular to overcome constraints associated with the incompatibility of acacia timber with cement. As *Acacia mangium* is one of the most important plantation species in Southeast Asia, the project has identified a major new resource for the production of these boards.

Dr Cabangon received a cash prize for the award and a plaque. The prize was awarded in the face of competition from several international and national agricultural and forest research institutions.

Vale John Vercoe

Dr John Vercoe, a long-time friend of ACIAR and supporter of international agricultural research, has died in Queensland at the age of 69. Dr Vercoe had a successful career as a ruminant nutritionist.

From 1966 to 1996 he worked at CSIRO Rockhampton, carrying out research on breed differences in feed utilisation and performance, and became director of the Tropical Beef Centre.

From 2001 to 2004, Dr Vercoe chaired the Board of Trustees for the International Livestock Research Institute and, from 2002 to 2004, the Committee of Boards and Chairs of the Consultative Group on International Agricultural Research (CGIAR). He was also a member of the Executive Council of CGIAR from 2002 to 2004.

Friends and colleagues at ACIAR will miss Dr Vercoe's enthusiasm and good humour. Our sympathies are with his wife Jan and family.

Database success

The Tropical Forages database continues to gain users and momentum, following its international release in July 2005. The database is the result of a major collaborative effort between CSIRO, the Queensland Department of Primary Industries and Fisheries, Australia's Centre for Biological Information Technology, the International Center for Tropical Agriculture (CIAT) and the International Livestock Research Institute.

Its aim is to boost productivity and sustainability of pastures in tropical and subtropical regions around the world. Through a web-based selection tool, users can find the best-adapted forages for

ROUNDUP



NEW APPOINTMENTS

John Murray

ACIAR's new country manager in Indonesia is John Murray, who brings a wealth of experience in development assistance. Before joining ACIAR, John worked for more than 12 years with AusAID. In Canberra, he worked on AusAID's Lao, Kiribati, Micronesia and Vietnam programs and also as a rural development policy adviser. John had a posting to Zimbabwe with AusAID and was also its representative on Bougainville. He later returned to Zimbabwe, where he worked on a project that promoted chilli pepper as a cash crop for smallholders to deter elephants from causing crop damage. For the past two and a half years John worked in a contract position in Phnom Penh as manager of AusAID's program support unit, where he supervised staff involved in the implementation of Australia's aid program to Cambodia. A graduate of La Trobe, the Australian National University and Cambridge, John's qualifications are in economics, natural resource management and development.

NEW PROJECTS

- ADP/2005/041 Trade and agricultural development in developing countries – China and India
ADP/2005/031 Linking smallholders and agribusiness, social capital and rural development in Eastern Indonesia
CIM/2003/014 Seeds of Life 2 (East Timor)
FST/1999/095 Improving the value chain for plantation-grown eucalypt sawn wood in China, Vietnam and Australia: genetics and silviculture
LPS/2004/023 Strategies to increase growth of the weaned Bali calf
SFS/2003/069 Policy options for improving the value of land use in smallholder Fijian agriculture

NEW PUBLICATIONS

Monographs

[Integrating knowledge for river basin management – progress in Thailand](#)

The authors have developed an integrated approach to water resources assessment and management. Their experience in Thailand demonstrates that multi-disciplinary and multi-agency teams can be successfully built to tackle complex problems. A Jakeman, R Letcher, S Rojanasoonthon and S Cuddy (eds). ACIAR Monograph 118, 224pp, price \$30 (plus postage and handling).

[Guidelines for surveillance for plant pests in Asia and the Pacific](#)

This manual will assist plant health scientists to devise surveillance programs and to transmit specimens to the laboratory for identification and preservation. Teresa McMaugh. ACIAR Monograph 119, 192pp, price \$30 (plus postage and handling).

Working Papers

[Survey of the mineral status of livestock in the Tibet Autonomous Region of China](#)

This report is the outcome of a cooperative program involving scientists from the Tibet Academy of Agricultural and Animal Sciences, the Institute of Animal Science, the Chinese Academy of Agricultural Sciences and Australia. They assessed the mineral and trace element status of yaks, cattle, horses and sheep from different environmental and management systems. N Tashi, L Xugang, Y Shunxiang and G Judson. ACIAR Working Paper 59, 36pp.

Impact Assessment Series

[Impacts of mudcrab hatchery technology in Vietnam](#)

R Lindner. ACIAR Impact Assessment Series No. 36

The impact assessment series and working papers are freely available as pdf files at www.aciar.gov.au. ACIAR's distribution 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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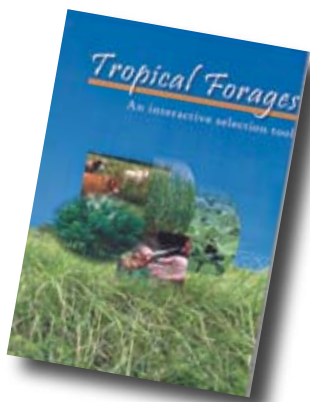
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their specific soils, production systems and management practices.

Tropical environments covered in the database range from wet lowland systems to high-altitude and semi-arid systems.

Information on the adaptation, use and management of more than 180 tropical and subtropical forage plants is presented in the database as informative, illustrated fact sheets, incorporating the knowledge of more than 100 international forage experts.

The database and selection tool is available on the internet at www.tropicalforages.info, a website hosted by CIAT in Columbia.

Project leaders Bruce Cook and Bruce Pengelly are pleased with the reception and increasing use of the system.

"We've received very positive feedback on the database since the launch from researchers and extension officers working in the tropics," Dr Pengelly says. "We've also been delighted with feedback from educators and trainers who have indicated they are considering changing their teaching methods in agronomy to make use of the system."

The Tropical Forages database and selection tool is also available as a CD-ROM by contacting CSIRO (Kristy.Wilson@csiro.au).

The project was funded by ACIAR, with additional financial and technical support from Deutsche Gesellschaft für Technische Zusammenarbeit, the Food and Agriculture Organization and the UK Department for International Development. ◀