

Research value highlighted at innovation awards



Dean Cameron (centre), one of six outstanding scientists awarded 2006 ATSE Clunies Ross Awards, with Victorian MP Joe Helper (left), parliamentary secretary for Regional Development, and Bruce Kean, recently appointed Chairman of the ATSE Clunies Ross Foundation. Courtesy ATSE Clunies Ross Foundation

Passion, dedication and the rich return to Australia from investment in scientific research were the major themes at the recent 2006 Academy of Technology, Science and Engineering (ATSE) Clunies Ross Awards, where six noted scientists were honoured with prestigious national recognition of their outstanding achievements in the application of science and technology for social and economic benefit.

Environmental Scientist Dean Cameron, founder and Managing Director of Biolytix Technologies, was rewarded for his vision and tenacity in developing the Biolytix® Waste Treatment System, with the help of GHD Engineers and the University of Queensland.

Acting on curiosity and a hunch that domestic waste treatment could be done more efficiently via nature's processes, Mr Cameron endured naysayers and significant personal sacrifice to develop his now multi-award winning system (see *Ecoss* 129).

This new approach uses worms, beetles and microscopic organisms to more

quickly and efficiently recycle sewage and household waste into safe irrigation water and compost, with the waste itself acting as a 'filter'. Biolytix systems can also be connected into networks (Biowater) that provide irrigation for gardens, parks and horticulture, halving sewerage infrastructure costs, potentially reducing rubbish collection costs by up to 75 per cent, and using one-tenth of the energy of conventional sewerage.

Accepting his award and endorsement, Mr Cameron drew attention to the clear potential for his research to advance waste treatment in developing countries, helping to alleviate extreme poverty by reducing disease and recycling precious water.

Approved for commercial use in all states and with growing international sales, the Biolytix system is another outstanding Australian research success.

CSIRO cotton research scientists Danny Llewellyn, Greg Constable and Gary Fitt were jointly awarded for their pioneering team effort to develop Australian cotton

plant varieties that are resistant to the devastating impact of the moth *Helicoverpa armigera*. Using a combination of leading-edge genetic modification, conventional breeding and insect ecology, their work has been instrumental in the consolidation of Australia's cotton export industry, making us the third largest cotton exporter in the world. Their varieties now represent over 90 per cent of all the cotton planted in Australia.

The team's efforts have also reduced pesticide use on cotton by a factor of 25 and they believe a pesticide-free future is possible. Further future advances could include transgenic traits to improve oil and fibre quality.

Also awarded was Metallurgist Gerald Roach, of Alcoa World Alumina's WA-based Technology Delivery Group, for his enduring scientific and technological input to process improvements that have significantly reduced the cost of alumina production and dramatically reduced energy use and bauxite waste, while improving product quality.

Ron Sacks-Davis, Managing Director, InQuirion Pty Ltd, was awarded for his work in creating large-scale information retrieval and text database management

Mr Cameron drew attention to the clear potential for his research to advance waste treatment in developing countries...

programs. His TeraText program, with a search capacity of tens of millions of pages per second per CPU, while simultaneously loading and indexing high volumes of new data, represents one of the few entirely Australian-developed IT products with worldwide markets. It has been used extensively by US and Australian intelligence agencies in the 'war on terror'.

Announcing the winners, Dr John Zillman, Acting Chairman of the ATSE Clunies Ross Foundation, said 'What differentiates ATSE Clunies Ross Awards winners from other talented scientists is their unique ability to combine their particular area of expertise with the range of skills needed to take an idea from the research stage to a commercially viable innovation with a broad, positive impact on Australian society.'