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**Panel of Referees:**

Each scientific editor has an independent panel of discipline-related referees who remain anonymous to ensure a process of objective reviewing of the papers.

## Foreword

Welcome to this special issue of the *Australian Farm Business Management Journal* on challenges and opportunities facing Australian agriculture over the next two decades.

Harsh environment (especially severe floods and droughts) and uncertain world markets are the two key factors that make farming in Australia extremely challenging. Proudly, Australian agriculture has been performing very well, contributing \$34 billion in 2010-11 to the Australian economy, thanks to the men and women of rural Australia for their dedication and resilience. There are no grounds to be complacent, though. There are still challenges, remaining and emerging, to be overcome and it is utterly important to address such challenges with foresight to ensure our agriculture to continue to perform well. It is fortunate that in this special issue of the AFBM Journal, we have the contributions addressing such challenges by a number of scholars, industry leaders, practitioners, and government officials. On behalf of the Journal and the rural industries, I thank all the contributors for sharing their wisdom with us. Sincere thanks are extended to all the reviewers for sparing their valuable time to help review and improve the papers. Thanks are also due to Kerry Madden for her skilful administrative support.

I do wish that the wisdom and forethoughts shared by the authors and reviewers on how various challenges should be handled for the future will stimulate more discussions, resulting in the development of better tactics and strategies for further advancement of Australian agriculture.

Professor Zhangyue Zhou  
Director, AusAsia Business Studies Program  
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## Introduction

This special edition of the *Australian Farm Business Management Journal* brings together perspectives from across the agricultural sector on the key challenges and opportunities facing rural industries. Importantly, not only do the authors critically assess the current state of agriculture in Australia, they also provide valuable insights into the policy, investment and management decisions required to enhance the capacity of the sector to meet the much publicised challenge of feeding an extra two billion people by 2050. The renewed emphasis on food security since the price spikes of 2008 has focused debate in Australia on future production systems in a changing climate, the impact of carbon and water markets, competition for land use, the role of foreign investment, a sustained high value Australian dollar and the level of public funding devoted to research and development.

Bill Malcolm's paper "Changing business environment: Implications for farming" aims to set the scene by identifying the major changes occurring in agriculture that are, and will directly affect agricultural production. The paper demonstrates the need for on-going productivity improvements on-farm. Australia has traditionally exported around two-thirds of its agricultural production. Increased demand for calories for a growing population coupled with an increased demand for protein-based foods as incomes rise could have important implications for the production mix in Australia and successful farmers will be those who can adapt to changing markets while sustaining and enhancing the productive base of their land.

Australian and international research has consistently demonstrated the strong link between research and development and productivity. Public sector investment in agricultural R&D is coming under increasing scrutiny and is addressed in John Mullen's paper "Public investment in agricultural R&D in Australia remains a sensible policy option". It is suggested by some that a declining public investment in R&D will be replaced by private sector investment. This issue is covered by Mick Keogh's paper "Private sector investment in agricultural research and development in Australia".

The global economy still faces many challenges, and for some the Global Financial Crisis, has become a convenient excuse for a retreat to protection. This overlooks the clear benefits of open and fair markets as a stimulant for economic growth. Australian researchers have a rich tradition in contributing to the economic arguments for open markets. Successive Australian Governments have supported this approach and Australia has clearly played a leading role in the push for global trade reform. With the current Doha Round of the WTO effectively stalled, there is increasing focus on alternate approaches, such as bilateral and multilateral trade negotiations. In the context of international trade, Australia must be vigilant on biosecurity, as demonstrated in the paper by Mike Nunn.

Sustaining the production base is critical for the future of Australian agriculture. Farmers are stewards of much of the landscape. Not only do they pursue this task in an environment that famously shifts from 'droughts to flooding rains', but they also have to face a shifting policy agenda. David Pannell's paper on "Environment protection and challenges for future farming" identifies a growing tension with respect to land use for agricultural purposes which also is increasingly expected to respond to societal demand for environmental protection. While this issue is not insurmountable, it does reflect increasing competition for land and could also be a symptom of the growing divide between rural and urban Australia.

The environment is also addressed in the timely paper "Towards a more nuanced discussion of the net-benefits of sharing water in the Murray-Darling Basin" by Morrison et al. This paper seeks to consolidate information on water sharing in the Murray Darling Basin and present it in a way that will help refocus the current debate on the benefits derived from water sharing. It is important that debates focus on facts in relation to such 'politically-charged' issues. It could be argued that the facts have been lost too much in the current debate over the Murray Darling Basin Management Plan.

Sam Nelson's paper, "Finding tomorrow's agricultural workforce" addresses a critical issue for the future of Australian agriculture. Increasing competition from other sectors, especially mining, has focused the attention of farm leaders on how agriculture can compete in the market for skilled workers, but also how we can encourage more young people to see agriculture as a worthwhile career choice. Many may be daunted at the prospects of fly-in, fly-out options for agriculture as we have seen in the mining sector, but this may be the reality if we cannot arrest the trends in the agricultural workforce.

The future of the Australian 'family farm' is also greatly affected by the age profile of Australia's farm workforce. Who takes over the farm is a real challenge facing many Australian farm families. Succession planning is an issue addressed in a paper by Mike Stephens, which also highlights the importance of contract law for forward planning in farm management. The importance of understanding important legal issues is also emphasised in the paper by Tony Smith.

Of course, these issues are all known challenges, there is also the unknown. Twenty years ago, who would have thought that mining would be competing with agriculture in traditional farming country in NSW and Queensland, that farmers could trade carbon, that agricultural colleges would be struggling for students and that farmers would be receiving payments to be stewards of the land. Farming in Australia has always adapted to changing circumstances. Our capacity to adapt is significantly enhanced by having better research outcomes, better policy settings and the confidence of government and the private sector to invest in the much needed infrastructure to support a vibrant agricultural sector.

There is every reason to believe that Australian agriculture has a bright future. We commend this special edition to you as an excellent summary of the known challenges facing agriculture and the policy options that can enhance our capacity to capitalise on the opportunities presented by a growing demand for the products we produce.

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## The character of *AFBM Journal*

*AFBM Journal* is a registered publication of the Australasian Farm Business Management Network (i.e. AFBMNetwork) and published by Charles Sturt University, Orange Campus, School of Agriculture and Wine Sciences.

AFBMNetwork is a professional organisation supported by Charles Sturt University – Faculty of Science, Curtin University – Muresk Institute; Massey University – College of Sciences; The University of Melbourne – Institute of Land and Food Resources and Marcus Oldham College. Members from these organisations and the AFBMNetwork membership are the primary users of the *AFBM Journal*. However, independent and other organisational professionals are encouraged to publish in the *AFBM Journal*.

AFBMNetwork vision and mission statements actively encourage the design of farming systems matched to the environmental, social, economic and marketing conditions of Australasia. It promotes quality education, research, consultancy and extension to service the primary sector and its organisations. The *AFBM Journal* will therefore publish quality papers related to the areas of Animal Systems and Technology; Cropping Systems and Technology; Ecological Agriculture; Farm Economics; Global Perspectives of Agriculture; Business Management and Decision-Making; Social Issues of Farming and Sustainable Farming Systems.

The Department of Education Science and Training of the Commonwealth of Australia – Higher Education Research Data Collection (DEST-HERDC) defines that *the essential characteristics of a research publication* are as follows:

- substantial scholarly activity, as evidenced by discussion of the relevant literature, an awareness of the history and antecedents of work described, and provided in a format which allows a reader to trace sources of the work through citations, footnotes, etc
- originality (i.e. not a compilation of existing works)
- veracity/validity through a peer validation process or by satisfying the commercial publisher or gallery processes
- increasing the stock of knowledge ([www.dest.gov.au/NR/rdonlyres/61C1FB66-A777-45AF-8FC5-C8EE5B380B5B/6127/2005HERDCSpecificationsFinal100605.rtf](http://www.dest.gov.au/NR/rdonlyres/61C1FB66-A777-45AF-8FC5-C8EE5B380B5B/6127/2005HERDCSpecificationsFinal100605.rtf); accessed on 20 June 2005)

*AFBM Journal* supports the above principles and while encouraging the publication of research results, useful to the professional farming related community, will undertake a stringent process of peer reviewing to ensure the quality of the papers published in the different issues of the Journal.

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## Instructions to authors

Instructions for intending authors of papers to be submitted to the *AFBM Journal* can be downloaded from AFBMNetwork webpage. Papers must be submitted online to the following email address: [kparton@csu.edu.au](mailto:kparton@csu.edu.au). Further enquiries must be addressed toward the same email address to the Chief Editor of the *Journal*, Professor Kevin A Parton.