"We believe that ideas and scenarios of varying quality, relevance and precision have entered the global food security debate; a clutter and diversity of views appear in journals, conferences, and particularly the media. Quite often, these ideas are presented as scientific fact when, in fact, they are not. The array and noise may be crowding out the quintessence: the need to increase global food production in ways that are ethical, efficient, and profitable for farmers, consumers and the environment."

The Hon John Kerin AM, Chair, Crawford Fund
Welcome to the Crawford Fund’s 2014 Parliamentary Conference. The Fund has again used its remarkable network to bring together a group of outstanding international and Australian practitioners of the art of policy making and the science of agricultural research and development. By doing so, we promote policies that are evidence-based and, we hope, help ensure that public and political support for investment in international agricultural research will be sustained.

In spite of ever tightening fiscal circumstances, that message has got through to successive governments in Australia and abroad. As a former Cabinet Minister, I know that policy making is indeed an art, especially when you are faced with a clutter and diversity of views, not all of them based on science. With the best advice available from a highly professional public service, a first rate scientific community and with quality independent counsel from others, it is possible to cut through to formulate sensible policy reforms that will eventually attract bipartisan and broad community support.

This year we have added two criteria to our selection of topics: ethics and efficiency. We have a better than usual gender balance in addition to having an international leading light to address the issue of women in agriculture, and we have successfully encouraged more, young people to join in through our own scholarships, through the newly formed Researchers in International Agricultural Development and through personal approaches to a range of universities. They will all be part of our Young Agricultural Scientists Forum after the conference.

The quintessential message that we hope will emerge from the Conference is the need to increase global food production in ways that are ethical and efficient; that are profitable for farmers and consumers, and that protect the environment. Research and training are essential to the delivery of these outcomes and we need more young people, and especially women, engaged in the effort in rewarding ways.

It is important to stress that in investing in agricultural research and training for development we are not necessarily even in a competitive world confronting a zero sum game. Australia can both do well and do good, a thesis which we have backed up with our report: “Doing Well by Doing Good: international agricultural research – how it benefits Australia as well as the developing countries” and a series of forums and media outreach on this topic around the country.

As well as encouraging support for international agricultural research, the Crawford Fund has another role: the conduct of Master Classes in key topics such as agribusiness, communication and biosecurity to name a few, and through the delivery by our State and Territory Programs of specialist individual and group training activities. Our training efforts have reached over 10,000 scientists in the developing world. These programs are delivered at very low cost by Australian institutions and coordinated by our largely voluntary work force and committees, and deliver very high returns.

Finally I wish to thank the record number of sponsors who have generously supported the Conference this year. A simple listing of their names elsewhere in this brochure seems an inadequate expression of our gratitude but their support reflects the passion that we all have for international agricultural research and training.

For a Food Secure World
An initiative of the Australian Academy of Technological Sciences and Engineering
ETHICS, EFFICIENCY AND FOOD SECURITY: Feeding The 9 Billion, Well

THE PARLIAMENTARY CONFERENCE PROGRAMME

Wednesday 27 August 2014
8:30am – 5:00pm
The Theatrette and Mural Hall, Parliament House

8:30
Registration

9:00
OPENING - Welcome
The Hon John Kerin AM, Chair of the Crawford Fund

MINISTERIAL OPENING
Australia’s Leadership Role: Using aid to tackle intractable problems and catalyse long term solutions
The Hon Julie Bishop MP, Minister for Foreign Affairs

9:30
KEYNOTE SESSION 1
Achieving Global Food Security: Building a new food system where nutrition, climate change and sustainability collide
Ms Rachel Kyte, World Bank Group Vice President and Special Envoy for Climate Change, and CGIAR Fund Council Chair

Economics of food insecurity and undernutrition
Dr Shenggen Fan, Director General, International Food Policy Research Institute

Australian agriculture’s role in meeting increased Asian demand
Mr Luke Chandler, General Manager, Food & Agribusiness Research and Advisory, Rabobank Australia & New Zealand

10:30
MORNING TEA IN THE MURAL HALL

11:15
PANEL: ETHICS AND EFFICIENCY IN THE FACE OF COMPETITION FOR FOOD
Chair: The Hon Margaret Reid AO, Board of Directors, Crawford Fund & former President, Australian Senate

Food Security and Population Growth: Are they connected?
Dr Laurent Zessler, Director and Representative for UN Population Fund Pacific Sub-Regional Office, Fiji

Food vs Feed: The livestock equation in food security
Mr Yudi Guntara Noor, President, Asian-Australasian Association of Animal Production Societies

Food vs Energy: Crops for energy?
Dr Willie Dar, Director General, International Crop Research Institute for the Semi-Arid Tropics

12:00
MODERATED Q&A SESSION WITH THE MORNING SPEAKERS

Dr Jim Woodhill, Principal Sector Specialist, Food Security & Rural Development, DFAT

12:45
LUNCH IN THE MURAL HALL

2:00
PANEL: ETHICS AND EFFICIENCY IN FOOD SECURITY CHALLENGES
Chair: Mr Richard Clark, Chairman, Grains Research and Development Corporation

Modern Technology: Saviour or threat?
Dr Elizabeth Finkel, Chief Editor, Cosmos Science Magazine

Food vs Nutrition Security: Feed the people, well
Dr Norah Omot, Director, Enabling Environment Programme, Papua New Guinea National Agricultural Research Institute

Watch your Waste: Lose less, consume sustainably, feed more
Dr Helen Szoke, Chief Executive, Oxfam Australia

2:45
AFTERNOON TEA IN THE THEATRETTE FOYER

3:25
KEYNOTE SESSION 2
Chair: Assoc Prof Robyn Alders AO, 2014 Crawford Fund Medal Awardee

Long term food demand in Asia and implications for Australian agriculture
Dr Jammie Penn, Chief Commodity Analyst and Assistant Secretary, Agricultural Commodities and Trade Branch, Australian Bureau of Agricultural and Resource Economics and Sciences

Agriculture Restructuring: Towards higher competitiveness and food security
Dr Nguyen Van Bo, President, Vietnamese Academy of Agricultural Sciences and member of the ACIAR Policy Advisory Council

4:00
MODERATED Q&A SESSION WITH FIVE AFTERNOON SPEAKERS

Dr Jim Woodhill, Principal Sector Specialist, Food Security & Rural Development, DFAT

4:40
ROUND UP AND CONCLUSIONS
Dr Denis Bllight AO, Chief Executive, The Crawford Fund

5:00
Close
The Hon John Kerin AM is Chair, Board of Directors, Crawford Fund. Born in Bowral, New South Wales, where he worked on the family farm, John Kerin is an Australian economist and former Labor politician. He worked at the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.

Since leaving politics, Mr Kerin has served with bodies including the Australian Meat and Livestock Corporation, CSIRO, the Poultry Cooperative Research Centre, the Australian Weed Research Centre; the Australian Bureau of Agricultural and Resource Economics (ABARE), before being elected to the Commonwealth Parliament as Australian Labor Party member for Macarthur in 1972. He lost his seat in the Labor defeat of 1975, and returned to ABARE, before being re-elected as member for Werriwa in 1978, following the retirement of Gough Whitlam. He served as Minister for Primary Industries (1983-1987), Minister for Primary Industries and Energy (1987-1991), Minister for Transport and Communications (1991), Minister for Trade and Overseas Development (1991-1993) and Treasurer (1991) in the Labor government of Bob Hawke.
It combines sustainable intensification – producing good quality food with fewer inputs – with a landscapes approach, so that progress on farms does not come at the expense of forests, streams, and biodiversity – the loss of which will impact farmers’ productivity and resilience down the line. Diverse farming systems also provide more diverse and nutritious diets.

This will have to be accompanied by a reduction in food waste and significant changes in the nitrogen cycle. Capitalizing on the potential of climate-smart agriculture requires broad, strategic partnerships and significant investment in research – particularly the global public goods that CGIAR and its partners may uniquely provide – to generate the scientific, political, financial and technological innovations needed to transform agriculture for the benefit of poor people and the planet.

**ABSTRACT**

**Economics of food insecurity and malnutrition**

Despite significant progress achieved in the last two decades, global food insecurity or hunger and malnutrition remain big challenges. Nearly 850 million people in the world continue to suffer from chronic hunger and more than 2 billion people suffer from micronutrient deficiencies. Moreover, overweight and obesity are on the rise in low- and middle-income countries.

Hunger and malnutrition impose huge economic and social costs which can be felt at individual, household, and societal levels. For example, hunger and undernutrition cost the global economy US$1.2–2.1 trillion per year, or 2–3 percent of global GDP, according to the Food and Agricultural Organization of the United Nations (FAO).

The economic returns to eliminating hunger and malnutrition can be felt at individual, household, and societal levels. For example, hunger and undernutrition cost the global economy US$1.2–2.1 trillion per year, or 2–3 percent of global GDP, according to the Food and Agricultural Organization of the United Nations (FAO). The economic returns to eliminating hunger and malnutrition can also be very high. Evidence from IFPRI-led research demonstrates that there are substantial, lifetime economic benefits from reducing child undernutrition.

In India, for example, every dollar spent on interventions to reduce stunting, is estimated to generate about US$34 in economic returns. This presentation will make the economic case for investing in the elimination of global hunger and malnutrition. The presentation will also focus on the inefficiencies of policies and practices that add to the burden of hunger and malnutrition, such as underinvestment in food security and nutrition; lack of social safety nets to protect the poorest, unsustainable natural resource use in food production; gender inequality in agriculture, and trade restrictions. The critical role of Australia in promoting the elimination of hunger and malnutrition, particularly in the Asia-Pacific region, will also be discussed.

Dr Shenggen Fan has been director general of the International Food Policy Research Institute (IFPRI) since 2009. Dr Fan joined IFPRI in 1985 as a research fellow, conducting extensive research on pro-poor development strategies in Africa, Asia, and the Middle East. He led IFPRI’s program on public investment before becoming the director of the Institute’s Development Strategy and Governance Division in 2005. He has served as the Chairman of the World Economic Forum’s Global Agenda Council on Food and Nutrition Security since 2012.

In 2014, Dr. Fan received the Hunger Hero Award from the World Food Programme in recognition of his commitment to and leadership in fighting hunger worldwide.

Dr Fan received a PhD in applied economics from the University of Minnesota and bachelor’s and master’s degrees from Nanjing Agricultural University in China.

Mr Luke Chandler is General Manager, Food & Agribusiness Research and Advisory, Rabobank Australia & New Zealand. Luke is responsible for managing Rabobank’s analysis and outlook for the world’s major agri commodities markets, including price forecasts for the key grains and oilseeds, softs and livestock commodity markets. In addition, his team of analysts works closely with Rabobank’s commodity division on servicing client price risk management needs and is part of the bank’s Food & Agribusiness Research and Advisory (FAR) division. Rabobank’s FAR division comprises a unit staffed by an international team of research specialists focused on producing comprehensive, world class research on global food and agribusiness markets, including the latest market trends, future industry developments, sector and environmental issues.

Luke has extensive experience working in commodities having worked in some of Australia’s major agribusiness companies.

**ABSTRACT**

Australian agriculture’s role in meeting increased Asian demand

Food and Agricultural producers across Australia and New Zealand are increasingly turning their attention to their close neighbours on the Asian continent. The proximity of almost a third of the world’s population has always been impossible to ignore; however, the region has taken on a whole new level of significance in recent times as developing countries across Asia have embarked upon a journey of economic transformation. Rising incomes across Asia and the changing dietary habits of households have already had a significant influence on many global agricultural markets and trade flows. This influence is expected to strengthen in coming years as the region grows its share of the global economy, while remaining somewhat limited in its ability to satisfy its own growing needs and wants for food and fibre products. Indeed, the dawning of the so-called ‘Asian Century’ holds great promise, but it also presents a great challenge to Australian and New Zealand food and agricultural producers. Understanding the business risks of supplying a diverse economic, cultural and political region is critical for Australian and New Zealand farmers and agribusinesses to maximise the value of their expansion into Asia.

Improving their understanding of these factors will also allow ANZ agribusinesses to better respond to the opportunities emerging in Asia at the right scale.

Developing strong partnerships along the supply chain and across borders will be critical to the success of Australia and New Zealand in capturing value in the growing Asian markets. Increasingly consumers across Asia are demanding high levels of food safety and traceability with many willing and able to pay a premium for the clean and green food we produce. Australia and New Zealand makes up less than 10% of Asia’s total food and agricultural imports, our focus needs to be on leveraging the many attributes of agricultural sectors at the high value end of the market.

The Hon Margaret Reid AO has extensive experience with Australian non-government organisations (NGOs) working in international aid as the former President of the Executive Committee of the Australian Council for International Development. Ms Reid was the first female President of the Australian Senate, former World President of the Commonwealth Parliamentary Association and was a member of the panel of The 2011 Independent Review of Aid Effectiveness. She serves on the Board of Directors of the Crawford Fund and Chairs its ACT Committee.

The Crawford Fund’s ‘Doing Well by Doing Good’ Report is available at our display in the Mural Hall.
ETHICS, EFFICIENCY AND FOOD SECURITY: Feeding The 9 Billion, Well

Speaker Biographies and Abstracts

Dr Laurent Zessler, Director and Representative for UN Population Fund (UNFPA) Pacific Sub-Regional Office, is based in Fiji. Dr. Zessler, a national of France, was appointed to UNFPA's sub-regional office in November 2013. Previously he was in Afghanistan for some three years as UNFPA's Country Representative. He joined UNFPA in 2011 from the Joint United Nations Programme on HIV/AIDS, where he had served as Senior Regional Advisor for West and Central Africa.

He also was country director for Brazil, Argentina, Chile, Paraguay, Uruguay, Vietnam, Pakistan and Ecuador, between 1996 and 2011. In 1995, Dr Zessler served as the AIDS/STI (sexually transmitted infections) Intercountry Advisor for the World Health Organisation (WHO) in Pakistan; until then he had served as the AIDS/STI Intercountry Advisor for PAHO (Pan American Health Organization)/WHO from 1989 in Ecuador, Venezuela, Uruguay, Argentina, Chile, Paraguay and in Washington DC.

Dr Zessler has also worked as an Associate with the Paueter Institute in France and as a medical officer for the Ministry of Foreign Affairs in Sudan. He holds a Doctorate in Medicine from the Paris School of Medicine, Université René Descartes, a Masters in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and held a Fellowship in Infectious Diseases at the School of Medicine from Johns Hopkins University.

ABSTRACT
Food Security and Population Growth: Are they connected?
Official United Nations population estimates and projections highlight that the world will have almost one billion more people within the next twelve years, reaching 8.1 billion in 2025; this is expected to further increase to 9.6 billion in 2050 and 10.9 billion by 2100. This is on the assumption that fertility rates will decline. One in seven people in the world is chronically hungry. A response to food security has to be considerate of the significant youth population, an ageing population and the impact of climate change. Food insecurity is at its highest levels in countries with high fertility rate; in the Pacific context, while adolescent fertility rates have declined in most Pacific countries, some rates are still above 50. Against the backdrop of population growth, food security (like poverty reduction & employment creation) requires increased economic output to provide for the needed increased agricultural output by 70% to feed the 9 billion people expected by 2100. Nothing short of an effective holistic approach will ensure a balance between population dynamics and food security. Dignity in social development and ensuring private sector participation are all important, most critical will be the empowerment of women who will play a key role in lessening food insecurity.

Mr Yudi Guntara Noor is currently President of the Asian-Australasian Association of Animal Production Societies. Mr Noor was born in Bandung, West Java Indonesia. In 1993, he graduated from the Animal Husbandry Faculty at the Padjadjaran University.

For two years he worked in the feedlot industry as a cattle selector, then started his own business. After 19 years in the feedlot industry, now he runs PT Agro Investama who own the PT Citra Agro Buana Semesta (CABS) feedlot in Garut West Java, which has a capacity of approximately 12,000 head.

Yudi Guntara Noor is a former Chairman of Indonesian Cattle Feedlot and Beef Producers (APFINDO) and Vice Chairman of Indonesian Cattle and Buffalo Farmers Association (PPSKI). He is also President of the Indonesian Society of Animal Science (ISAS), Head of the Permanent Committee for Dairy and Beef Cattle, Indonesian Chamber and Comerce (KADIN Indonesia), Chairman, West Java Sheep and Goat Farmers Association (HPDKI) and a Member, Trustees committee in Padjadjaran University.

ABSTRACT
Food vs Feed: The livestock equation in food security
The world population of 7.2 billion is projected to increase and reach 9.6 billion by 2050 (UN 2013), FAO predicted demand for food, fuel, and fiber will thus increase 60% by the year 2050. Demand for beef and milk will increase significantly, and create global concern over the level of feeds required to meet the projected levels of demand.

Indonesia is the 4th largest populated country in the world with almost 240 million population in 2010 and predicted about 320 million population in 2050. High population, economic growth, and increased public demand for high quality protein sources such as beef and milk will result in a significant increase in demand for these food products. Increasing livestock and dairy production to secure food availability to feed the population is a high national priority. Food, feed, and fuel competition use along with climate change and massive land clearance for housing and industries have encouraged Indonesia to improve the competitiveness and efficiency of livestock and dairy production systems. Recent public awareness of ethical and environmental issues in animal production also require greater attention as failing to do so will result in public distrust in these industries.

As feed and feeding contribute to more than 70% of the cost of livestock or dairy production, utilizing alternative cheaper feeds which are not competing with foods is a commercial necessity. Fortunately, there are by-products of agro-industries in Indonesia that can be used as alternative feeds for example cassava meal, rice straw, copra meal, and palm oil by-products such as palm kernel cake and palm fronds. The nutritive value of these by-products can be improved by physical or biological treatment. Among others, palm oil by-products are the highest potential feed alternatives since Indonesia is one of the largest palm oil producing countries in the world. Consequently, integrating livestock, dairy, and palm oil plantation systems is seen as preferable way forward to deliver better efficiency, zero waste agricultural systems, and adding more value for the local communities. Also grazing management under palm oil plantations may improve the cost-efficiency of cattle breeding systems.

Dr Willie Dar PhD is Director General, International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) near Hyderabad in Andhra Pradesh, India. ICRISAT is a non-profit, non-political and pro-poor institute and a member of the CGIAR Consortium. With his outstanding leadership as Chair of the Alliance Executive (2005), the Alliance of Centers was made the third pillar of the CGIAR system. He was Chair of the Committee on Science, Technology and the United Nations Convention to Combat Desertification (UNCCD) from 2007 to 2009. Dr Dar was also Member of the UN Millennium Task Force on Hunger. Prior to joining ICRISAT, he served as Presidential Adviser for Rural Development; and Secretary of Agriculture in the Philippines (equivalent to Minister of Agriculture). Before this, he was Executive Director of the Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD) and Director of the Bureau of Agricultural Research (BAR) of the Philippine Department of Agriculture.
Dr Dar served on the governing boards of the Australian Center for International Agricultural Research (ACIAR) and the CGIAR’s International Maize and Wheat Improvement Center (CIMMYT) as well as of ICRISAT.

He was Chair of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the Coarse Grains, Pulses Research and Training (CGRPT) Center.

ABSTRACT

Food versus Energy: Crops for energy

The global production and use of biofuels have increased dramatically in the past few years due to volatile and increasing oil prices, and environmental concerns. The main feedstocks for ethanol are sugarcane, maize and to a lesser extent wheat, sugarbeet and cassava. Biodiesel oil-producing crops include rapeseed and oil palm. All divert land away from food production to energy production. This has in turn triggered the food versus energy debate with several studies attributing the rising food prices to the feedstock diversion to biofuels, hurting poor consumers and net food importing countries.

To overcome the food-fuel trade-off, several countries are promoting feedstocks that can grow on marginal lands and hence do not compete with food production.

At ICRISAT, we launched a global pro-poor ‘BioPower Initiative’ focusing on biomass sources and approaches that do not compete with, but rather, enhance food and nutritional security. Sweet sorghum is one such “smart” multipurpose crop that does not compromise on food security while producing energy. The grain is used for food while the stalk use used for juice extraction for bioethanol.

Further, the use of sweet sorghum in existing sugar mills as biofuel feedstocks provide a win-win situation to both the farmers and industry. Data from India, Philippines, China and Brazil indicates that sweet sorghum is an economically viable, socially equitable, environmentally sustainable and resilient crop.

Dr Jim Woodhill is Principal Sector Specialist, Food Security & Rural Development, Department of Foreign Affairs and Trade (DFAT). Prior to joining DFAT in 2013, Jim was Director of the Centre for Development Innovation (CDI) at Wageningen University and Research Centre in the Netherlands. Jim has worked extensively on the challenges of global food security and has a keen interest in brokering cooperation between business, policy, NGO and research stakeholders. He studied agricultural science at the University of Sydney and gained a PhD in Political Economics from the Australian National University.

Mr Richard Clark was appointed Chairman of the Grains Research and Development Corporation (GRDC) in October 2013. He is a farmer and company director from Tullloona, NSW, where he and his wife Barbara run an extensive 1340ha grain enterprise, focussing on summer and winter cereals, pulses and oilseeds.

Richard is a graduate of the Orange Agricultural College and a Fellow and graduate of the Australian Institute of Company directors. He has extensive experience as a director and Chairman of organisations in the agricultural sector and more specifically, the grains industry. His experience includes the positions of founding Chair of the NSW Farmers Grains Research Committee and Chairman of the Wheat Research Foundation of NSW.

He has served as a Director of wheat breeding company Advantage Wheats Pty Ltd, ChemCert Ltd, GrainFoods CRC and Quality Farms Australia, and was a past Director of the GRDC from 1996 until 2002. During his career, Richard has also held leadership positions within a number of national agricultural bodies. He was a councillor of the Grains Council of Australia and a councillor of the National Farmers Federation, where he was a member of the Trade committee, Economic committee, Climate Change taskforce and Industrial Relations committee.

Dr Elizabeth Finkel is Chief Editor, Cosmos Science Magazine. Dr Finkel received a PhD in Biochemistry from the University of Melbourne. She spent five years at the University of California, San Francisco, studying the genes that transform a mushy egg into a shapely embryo. For the last 20 years she has been a science writer for scientific and lay audiences including serving as a correspondent for the American magazine Science and an associate editor for Cosmos magazine, a popular science magazine that she co-founded. In June 2013 she was appointed the next Cosmos Editor in Chief.

In 2005, Elizabeth’s book: “Stem Cells: Controversy at the Frontiers of Science” was published by ABC books. The book won the Queensland Premier’s literary award and was short-listed for the Victorian Premier’s award and the Australian Government Eureka Award for promoting the public understanding of science. Her second book: “The Genome Generation” was published in January 2012 by Melbourne University Publishing.

ABSTRACT

Modern Technology: Saviour or threat?

Journalistic ethics requires objectivity and balance. Sound straightforward? The reporting on GM crops and biotechnology is anything but. The terrain is full of paradoxes.

Notional good guys like NGOs – would-be guardians of the environment and human well-being – have no qualms about distorting information about GMOs even when they lead to benefits for the environment and people. Witness the campaigns again vitamin A rice and Bt cotton.

Card-carrying scientists champion research that is poorly designed and whose conclusions bear no statistical significance. Witness the circus around the publication, retraction and republication of Giles Seralini’s paper. One might think that people approach the issue on the basis of evidence. That seems not to be the case. Rather, pre-existing world views seem to dominate.

Politicians and NGOs appear to exploit these attitudes – fanning the flames for their own ends. As with climate science, it seems disarmingly easy to distort logic and evidence.

Staggeringly the attack on GM crops seems to know no bounds. Recently European NGOs including Greenpeace, called on the abolition of the position of the EC Chief Scientific Officer. Accusations of conflict of interest and undue corporate influence resonate and stick like mud. And there is a view that providing information barely helps: it is only filtered to fortify pre-existing positions. Disheartening, but that’s the nature of public discourse. Journalists can only continue to explain the issues and the science as objectively and clearly as possible. The battle is not just about GM crops but for science itself.
ETHICS, EFFICIENCY AND FOOD SECURITY: Feeding The 9 Billion, Well

Speaker Biographies and Abstracts

Dr Norah Omot is the Director of the Enabling Environment Programme with the Papua New Guinea (PNG) National Agricultural Research Institute (NARI). She is an agricultural economist with research interest in policies, market systems and value chains, social cultural studies and innovation systems.

Dr Omot has been involved in two ACIAR projects through the PNG NARI. One project, ‘Improving the marketing systems for fresh produce in the highlands of PNG’, focused on developing supply-chains for the exportation of produce through improved postharvest management and buyer-seller relationships.

The second project targeted constraints to women’s participation in market-systems and aiming to improve their livelihoods by developing their business acumen.

Work on these projects led to Dr Omot being awarded a John Allwright Fellowship, sponsored by ACIAR. Subsequently she received a PhD from the University of Canberra. Her studies identified weaknesses in the process of bringing the vegetables from production to market in PNG. Dr Omot is now running the NARI program, ‘Enabling environment’, which is identifying the socio-economic barriers to sustainable agricultural development in PNG. Dr Omot also works closely with the National Office of the PNG Women in Agriculture.

ABSTRACT

Food Versus Nutrition Security: Feed the people, well

Nutritional security is often not adequately considered and addressed in many agricultural research and development (R&D) projects despite the wide occurrence of malnutrition. In many countries malnutrition constitutes a ‘double burden’ with under-nutrition and increasing obesity happening at the same time. Nutritional insecurity occurs either as a result of choice, of not knowing the nutritive value of food and their importance in diet, and/or of ‘force’ through deficiencies in food supply systems.

An assessment of the smallholder farming environment in PNG revealed environments that are vulnerable to food and nutrition insecurity. While attempts had been made to increase productivity of commodities in demand in these areas, less attention had been given to nutrition. This disconnect can be addressed by:

- Considering nutrition in initial stages of R&D planning; and
- Developing projects that focus on both productivity and nutrition.

The presentation will illustrate the possibilities of traditional vegetables through:

- Building nutrition indicators into projects’ monitoring and evaluation systems; and by
- Working with women groups and community organisations to create awareness, and training in schools and health clinics (targeting women) in areas where research projects are implemented.

In 2011, Helen was awarded the Law Institute of Victoria Paul Baker Award for contribution to Human Rights. Helen has extensive experience in management, community development, organisational development, consumer advocacy and regulation in the education and health sectors. She is a Graduate of the Australian Institute of Company Directors and a Fellow of the Institute of Public Administration.

ABSTRACT

Watch your Waste: Lose less, consumer sustainably, feed more

The world already produces enough food to feed the world, yet over 800 million people are hungry. Further to this paradox, increasingly we are aware of the potential negative impacts that expanding agriculture can have. Valuable ecosystems and carbon sinks may be lost or threatened, while vulnerable people – particularly women, children and Indigenous peoples – can be forced off their land as we see increasing levels of competition for arable land.

Curbing waste in the food system is critical to more sustainable natural resource use and reducing agriculture’s contribution to climate change. Addressing food waste can also bring social benefits at the family level – supporting smallholder farmers to retain more of their crop and household consumers to spend less on food purchases.

The dynamics of food waste also differ between communities. In smallholder agriculture, up to 40% of food produced can spoil, rot or be diseased before it reaches the plate. Reasons for such losses can include a lack of post harvest storage facilities or locally appropriate options for pest management. This can have dire impacts for communities with limited access to water or land, and for those facing the stress of adapting to a rapidly changing climate. Yet in long-chain agriculture, food is similarly wasted – up to 20% of Australian household food purchases could be discarded – contributing heavily to Australia’s already weighty carbon footprint.

This presentation explores some of the ways that Oxfam Australia approaches curbing waste in the food system – drawing on our analysis of trends in global agriculture, as well as work on the ground in smallholder agriculture and public education efforts at home.

Assoc Prof Robyn Alders AO is the most recent recipient of the prestigious Crawford Fund medal, for her considerable and continued contribution to international agricultural research through the Fund’s programs and related activities.

For over 20 years, Robyn has worked closely with smallholder farmers in Africa and Asia as a veterinarian, researcher and colleague. For much of this time, she has been working with an emphasis on the development of sustainable infectious disease control in animals in rural areas in support of food security and poverty alleviation. Her current research and development interests include food and nutrition security (domestic and international), One Health, gender equity and science communication. In August 2012, she rejoined the Faculty of Veterinary Science at the University of Sydney as a Principal Research Fellow. She is a non-salaried Director of the International Rural Poultry Centre within the KYEEMA Foundation and a member of the Crawford Fund’s NSW Committee.

Dr Helen Szoke commenced as Chief Executive of Oxfam Australia in January 2013. Prior to this appointment, Helen served as Australia’s Federal Race Discrimination Commissioner, following seven years as the Victorian Equal Opportunity and Human Rights Commissioner. She is currently Co-Chair of Make Poverty History, an ExCom member of ACFID, a member of the Deakin University Master of International and Community Development Advisory Board, a member of the Advisory Committee for the Centre for International Mental Health and a member of the Mining for Development Advisory Committee.

Dr Jammie Penn is Chief Commodity Analyst and Assistant Secretary, Agricultural Commodities and Trade Branch at Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). His professional expertise and achievements revolve around commodity analysis and economic research important to Australia’s primary industries.
Speaker Biographies and Abstracts

Jammie has a PhD in econometrics from the Australian National University and a Master’s degree in economics from the State University of New York at Stony Brook.

Before joining ABARES, Jammie worked at the Australian National University, the former Industries Assistance Commission and the State University of New York at Stony Brook in the United States.

ABSTRACT

Long Term Food Demand in Asia and Implications for Australian Agriculture

Food consumption in Asia is projected to increase significantly toward 2050, with consumption patterns shifting from traditional diets oriented around starchy staples to more varied diets with greater quantities of higher value and higher protein foods. Although food production in Asia is also expected to increase, it will not be sufficient to meet the growth in Asian food consumption for many products.

For Japan and the Republic of Korea, growth in food consumption is projected to be limited through to 2050, due to projected declining populations and modest future income growth. The most significant rise in food demand is expected to occur in China toward 2050. The rise in food consumption in China will be characterised by significantly higher demand by urban consumers for high-value foods, such as dairy products, beef, sheep and goat meat, fruit and vegetables. For rural consumers in China, growth in consumption of high-value commodities is also projected but the increases, on average, are expected to be smaller than urban households.

India is one of the largest consumers and producers of grain in Asia and has a self-sufficiency policy. By 2050, India is projected to become a significant net importer of fruit, vegetables and dairy products. For the ASEAN member states as a whole, imports of wheat, beef and dairy products are projected to rise toward 2050. Vegetable and fruit consumption in the ASEAN region is projected to nearly double by 2050.

Australia needs to remain competitive to meet the opportunities provided by higher Asian food demand. Apart from the role governments will play in reducing market barriers, the contribution from the private sector will also be important. Strong working relationships with supermarkets and hypermarkets in Asia will facilitate food exports.

Dr Nguyen Van Bo is President of the Vietnam Academy of Agricultural Science, Vietnam (VAAS). He began his career in 1978 as a soil and plant nutrition scientist and subsequently worked in soil fertility, fertilizer efficiency, farming systems, land use policy and environmental monitoring. His current work focuses on food security, biofuels, and climate change mitigation and adaptation.

Dr. Bo worked as Director General of the National Institute for Soils and Fertilizers (1994-1999) and Director General of the Department of Science and Technology and Environment, Ministry of Agriculture and Rural Development (1999-2005) before becoming President of VAAS in 2006. Dr. Bo holds a PhD in Biology from the Moscow State University, Russia and was awarded the Crawford Fund Medal in 2011 in recognition of his contributions to international agricultural research.

ABSTRACT

Agriculture Restructuring: Towards higher competitiveness and food security

Ensuring food security is not merely an economic or humanitarian activity. It also actively contributes to national as well as global socio-political stability. During the last 25 years of implementing its Renovation Policy, Vietnam has achieved national food security, actively contributing to the goals of eliminating hunger, alleviating poverty, and ensuring regional and global food security. Vietnam is changing from a net food importer to an exporter of many agricultural commodities.

However, Vietnam is an agriculture based economy with more than 70 per cent of its population engaged in agriculture. A very high proportion of many of the commodities it produces are exported: 25 per cent of its rice production, 90 per cent of coffee, rubber, cashew nut and cassava, and 95 per cent of black pepper. So, any fluctuation on the international market has an adverse impact on its agricultural industry.

More difficulties and challenges will face the country in the years to come: rapid population growth; decreasing farm areas and water resources; more frequent natural disasters, floods, droughts; decreasing levels of investment in agricultural production; barriers to agricultural international trade; low incomes of the poor, reducing their access to food; and food demand increasing for other purposes, including the production of bio-energy. Climate change is an added challenge.

Vietnam agriculture restructuring policy aims at higher competitiveness and ensuring food security in the context of climate change. Efforts are focused on policies to stabilize the area of land devoted to rice cultivation; increasing investment in water management infrastructure; and promotion of mechanization in rice production and processing. It will apply scientific and technological advances to varietal improvement; natural resource management, pest and disease control, and post-harvest technologies. It will also re-organize the institutional set up for agricultural production, linking production with processing and marketing. This will raise the income of rice growers, modernize rural life and enhance farmer’s livelihoods. At the same time, it will actively seek to mitigate the impacts of climate change, especially of rising sea levels. Together with sound policies to guarantee its national food security, Vietnam is ready to cooperate with its neighbours, share its experiences in agricultural development with the international community; and actively contribute to ensuring food security globally.

Halving the proportion of people suffering from hunger by 2015 is one of the eight Millennium Development Goals agreed to by many nations more than a decade ago. With many difficulties and challenges still facing food security, achieving this goal will require the effort of every nation, and especially active support from developed countries and international organizations. This demands coordinated action at regional levels as well as on a global scale.

Dr Denis Blight AO, the Chief Executive of the Crawford Fund has had a career including positions as an Australian diplomat, public servant and chief executive. His association with international agricultural research began in earnest some 25 years ago. Prior to working for the Crawford Fund, he was Director-General of CAB International, an intergovernmental body in research, training and publishing in the life sciences, and had 15 years with IDP Education Australia, the international development program of Australian universities and colleges, including the position as Chief Executive.
ETHICS, EFFICIENCY AND FOOD SECURITY: Feeding The 9 Billion, Well

Agricultural Student Scholarships to 2014 Conference

The Crawford Fund is keen to increase the interest of young Australian agricultural scientists in international agricultural development. To this end, we provide travel scholarships to our conference for young agriculture scientists from around Australia, and organise a special forum for them following the conference to learn more about the international agriculture for development scene, the impact it has and the opportunities it provides. This year, the forum will be held for our scholars as well as all students attending the conference, at the National Library on 28 August at 9.30am.

The young agricultural scientists being supported to attend the conference and the young scientists’ forum are:

- Abu Abdullah, Charles Darwin University
- Rowan Alden, Charles Sturt University
- Katherine Ashley, University of Sydney
- Jessica Bogard, University of Queensland
- Brendan Brown, University of Adelaide
- Temma Carruthers-Taylor, Australian National University
- Mardee Cassin, University of Sydney
- Jade Chan, University of Queensland
- Georgina Coggins, University of Sydney
- Julia de Bruyn, University of Sydney
- Heather Feetham, University of Adelaide
- Danielle Gale, Curtin University
- Alison Hall, Tasmanian Institute of Agriculture
- Jenny Hanks, University of Melbourne
- Tara MacKenzie, University of Sunshine Coast
- James Manson, La Trobe University
- Kirsty McCormack, University of New England
- Soumi Paul Mukhopadhyay, Charles Sturt University
- Aaron Preston, Charles Sturt University
- Zita Ritchie, Department of Environment & Primary Industries, Victoria
- Julia Smith, Department of Agriculture and Food, WA
- Lydia Turner, Tasmanian Institute of Agriculture
- Sarah van Bronswijk, Australian National University
- Amy Vos, James Cook University
- Annie Warren, University of New England
- Yi Zhou, University of Adelaide

Training in Science and Research for Food Security

Are you involved in an agriculture for development project that would benefit from training for your developing country partner scientists?

The Crawford Fund’s training program encourages the transfer of technology and knowledge to people employed in agricultural development in developing countries:

- Our master classes are aimed primarily at mid-career agricultural scientists, senior administrators, senior academic personnel, decision makers and public servants in developing countries, and focus on new areas of knowledge which are changing the way research is conducted.
- Our training awards and courses offer practical, short-term, hands-on training tailored to the needs of an individual or for a group to increase the practical skills of scientists and technical personnel in developing countries.
- The Crawford Fund offers two separate awards for outstanding researchers in developing countries. The Derek Tribe Award is made biennially in recognition of distinguished contribution to the application of agricultural research and the Crawford Fund Fellowship is awarded each year to provide further training of an agricultural scientist whose work has shown significant potential.
The Crawford Fund wishes to thank the following sponsors and supporters for this year’s conference.

Australian Academy of Technological Sciences and Engineering (ATSE)
Australian Agricultural and Resource Economics Society (AARES)
Australian Centre for International Agricultural Research (ACIAR)
Australian International Food Security Research Centre in ACIAR
CBH Ltd
CGIAR
Coffey International
Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Cosmos Media
Department of Agriculture
Department of Foreign Affairs and Trade (DFAT)
Gardiner Foundation
Global Food Studies, The University of Adelaide
Grains Research and Development Corporation (GRDC)
International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)
International Food Policy Research Institute (IFPRI)
La Trobe University, Securing Food, Water and the Environment
Murdoch University
Office of the Gene Technology Regulator (OGTR)
Plant Biosecurity Cooperative Research Centre (PBCRC)
Queensland University of Technology, Institute for Future Environments
Rabobank
Rural Industries Research and Development Corporation (RIRDC)
Tasmanian Institute of Agriculture (TIA)
United Nations Population Fund (UNFPA)
University of New England, School of Environmental & Rural Science
University of Queensland
The University of Western Australia, Faculty of Science
The University of Western Sydney
The World Vegetable Centre (AVRDC)