



**THE CRAWFORD FUND**  
*For a Food Secure World*

**SCHOLAR PROGRAM**



**SUPPORTING**  
**AUSTRALIA'S NEXT-GENERATION**  
**AGRICULTURAL SCIENTISTS**

## SUPPORT A SCHOLAR

Would you like to donate funds to help additional young scientists and students to attend the Crawford Fund Annual Parliamentary Conference and Scholar Day to encourage them in study or careers in international development?

Or, you may have eligible people who you would like to nominate and support.

Individuals, organisations or companies that opt to make a donation can be listed in the conference proceedings, should they wish. Donations are tax deductible. Scholarships cover the cost of registration, travel and accommodation to these life-changing events.

For more information about supporting a Crawford Fund Scholar, visit our website [bit.ly/1LAjaCP](http://bit.ly/1LAjaCP), or to discuss your donation or a possible nominee you'd like to support contact:

Ms Cathy Reade  
Director, Public Affairs and Communication  
✉ [cathy.reamde@crawfordfund.org](mailto:cathy.reamde@crawfordfund.org)  
☎ +61 (0)413 575 934

Cover: Katherine Ashley vaccinating a cow in a makeshift crush in the Takeo province, Cambodia.  
Photo: Department of Animal Health and Production, Cambodia

Inside cover: Zita Ritchie, centre, with regional dairy advisors in Lembang, Indonesia, where she was helping to build the capacity of the West Java dairy industry.  
Photo: John Moran



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# ENGAGING

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## THE SCHOLAR PROGRAM

The Crawford Fund Scholar Program is part of our efforts to encourage young Australians to engage in international research, development and education for the benefit of developing countries and Australia.

Scholarships to attend the Crawford Fund Annual Parliamentary Conference and our special “Scholar Day” are awarded to young students and scientists who have a genuine interest in international agricultural development.

Since the program started in 2010, we have had more than 80 Scholars.

Here are some of their stories.

You can also hear the Scholars being interviewed for this publication on our YouTube site.



Anthony visiting a small store owner in an isolated village in East Timor.  
Photo: Anthony Leddin



Anthony is one of fewer than 100 specialist plant breeders in Australia  
Photo: The Standard

## ANTHONY LEDDIN, VICTORIA

Anthony had a vision in 2011.

**H**e wanted to start a project where he could share his plant-breeding skills with people in developing countries.

The result — Plant Breeders Without Borders — will match volunteer plant breeders from across the globe to research projects.

In 2011, while Anthony was conceiving his idea and working as the research manager for Valley Seeds in Victoria, he applied for a scholarship to attend the Crawford Fund Annual Parliamentary Conference.

It was the perfect opportunity for him to make the vital connections with people who had extensive experience working in agricultural science outside Australia.

“Being younger, you are pretty gung-ho, and keen to get out there and make a difference. But there are so many more challenges than just going somewhere and saying, ‘Right, we are going to grow more food, and this is how you do it,’” said Anthony.

“I always imagine myself as the ‘Indiana Jones’ of the plant-breeding world. But given the experience of people who have been involved in this field for a long time, it is worth young people having them as mentors.”

Since being a Scholar, Anthony has gone on to work with Plant Breeders Without Borders in its first pilot project in Ethiopia, funded by the Crawford Fund and the Consultative Group on International Agricultural Research (CGIAR).

He continues to foster the relationships he gained through the program — he seeks input from international agricultural researchers into how he can improve his ideas.

He is spurred on by the prediction that the world’s population will be more than nine billion in 2050, and food production must be increased by 70% to feed that many people.

“It is an amazing task that people in agriculture have been set to achieve, so we need everyone out there to do it.”

“Plant breeding is not a complicated science — it’s more about technique. You can make such a big difference by showing people the methods of cross-pollinating plants.”

“When I was working in Ethiopia — through the Crawford Fund — it was great to see the look on people’s faces at the excitement of being able to do plant crosses themselves.”



Brendan (right) facilitating a workshop at the Bako agricultural research station, Ethiopia. Photo: Brendan Brown



Brendan exploring on-farm trials with a farmer in the Shala District, Ethiopia. Photo: Brendan Brown

## BRENDAN BROWN, SOUTH AUSTRALIA

Brendan is a young researcher passionate about food security.

After completing an agricultural science degree in soil sustainability at the University of Sydney in 2010, Brendan spent a year as a graduate research officer with the Australian Centre for International Agricultural Research (ACIAR) working on projects in Kenya, Tanzania, Iraq, Jordan, Egypt and Cambodia.

He then took on an Australian Youth Ambassadors for Development assignment in Ghana with the Food and Agriculture Organization of the United Nations.

18 months into his PhD at the University of Adelaide, Brendan is now involved in the Sustainable Intensification of Maize-Legume Systems for Food Security in Eastern and Southern Africa project, implemented by the International Maize and Wheat Improvement Centre and funded by ACIAR.

Having recently finished his research in Ethiopia, he is now based in Lilongwe, carrying out a contrasting southern African study in Malawi and Mozambique.

“My research is looking at smallholder agriculture, with a focus on the socio-economic, cultural and political constraints to the adoption of improved practices in maize-legume systems.”

“Maize is life in many of these systems but, for me, improving food security isn’t just increasing yield. It’s about understanding farmer needs and building a robust system

that enables change through policies, extension messaging and local innovation. The research shelf is bulging yet farmers are still hungry.”

With such a research focus, it is not surprising that Brendan became a Crawford Fund Scholar six months into his PhD.

“Attending the Scholar’s Conference didn’t directly influence my research, but I certainly came away with a big book of notes — of things to amend in my own work, and new ideas to help me tinker with what I’m doing, to improve the focus of my research and find the niche for my outputs,” he said.

Of most significance, said Brendan, was the opportunity the conference gave him to interact with other Scholars.

“It really buoyed my spirits to discover that there are similar people out there working on similar things.”

“That really shone through for me,” he said. “With all my time spent away I was a little out of the loop from some Australian researchers — particularly, young researchers.”

He’s now part of the Researchers in Agriculture for International Development, that has been encouraged by Crawford Fund.



Danielle Gale on a farm field trip in south-west Western Australia.  
Photo: Fatima Rahman



Danielle spent 3 months teaching primary and high school students in a semi-rural village in Uganda. Photo: Danielle Gale

## DANIELLE GALE, WESTERN AUSTRALIA

Danielle has some pretty big questions on her mind.

**H**ow can we feed nine billion people come 2050, and do it ethically and efficiently in a world challenged by a growing population, declining natural resources, a changing climate, and restrictions on international trade?

Climate change, sustainability and agriculture have long been areas of interest to Danielle, and she completed science and economic degrees with the goal of working in these fields.

“I’m now 18 months into my PhD, which is looking at quantifying the carbon footprint of meat production in different pasture systems of Western Australia, and then finding the most cost-effective and sustainable mitigation strategies to reduce that footprint,” she explained.

Danielle was six months into her PhD when she applied for the Crawford Fund scholarship.

“Although I was already pretty certain that food security and working with developing nations was the direction I wanted my career to go in, the Conference just cemented it for me.”

“It can be quite isolated here in Western Australia in terms of meeting people with career goals similar to my own: young

researchers passionate about working in international food security and sustainability, particularly in developing nations. To meet so many people like that at the Conference was incredible.”

Attending the Conference also helped Danielle realise exactly how she wanted to achieve her goals.

“The recurring message throughout the Conference was that if we are to succeed in addressing food security, we must acknowledge its highly integrated nature and adopt a holistic approach,” she said.

“A lot of the Scholars I met have a more hands-on focus, working in places like Vietnam and Cambodia with smallholders and their animals, one-on-one. But my goal is a little different.”

“I’d like to be working in these countries too, especially in Africa, but at a governmental level in an advisory, policy-based role.”

For Danielle, the Conference reinforced her view that “the participation of all parties — from smallholder farmers to the private sector and governments — is necessary if we are to transform the current agricultural system into a truly sustainable one.”



Katherine (centre left) with farmers and colleagues in Cambodia. Photo: Department of Animal Health and Production, Cambodia



Katherine vaccinating a cow in a makeshift crush in the Takeo province, Cambodia. Photo: Department of Animal Health and Production, Cambodia

## KATHERINE ASHLEY, NEW SOUTH WALES

Katherine's journey in international development began in 2012.

For Katherine Ashley, feeding the world's growing population in a sustainable and ethical way is one of the most pressing issues, and people who live in developed countries have a moral obligation to assist those who are less fortunate.

"As a young agricultural scientist working in developing countries, I'd heard a lot about the work of the Crawford Fund in promoting awareness of these issues and supporting international agricultural research," said Katherine. "So I went to the Conference to learn more and engage with other people interested in the same issues."

Katherine's journey in international development began in 2012, when she spent part of her honours degree working with smallholder farmers in Cambodia.

She returned to the University of Sydney in 2014 to continue working to improve the biosecurity of these farms, as part of an Australian Centre for International Agricultural Research-funded project that would be the basis for her PhD.

**"But it was the Crawford Fund scholarship that really pushed me out of my comfort zone."**

"It cemented the path I was already on by making me realise I was pursuing something worthwhile."

In particular, it gave Katherine the confidence boost she needed to leave her base in Sydney and move to where the project was happening — in Cambodia.

"After meeting so many people living and working in-country, I decided I would come and live in Cambodia for six months to learn the language and gain hands-on field experience alongside my in-country colleagues," she said.

The three-year livestock extension project, which started in January 2015, is aiming to alleviate poverty in Cambodia by working with smallholder farmers to improve the health of their animals through improved animal biosecurity.

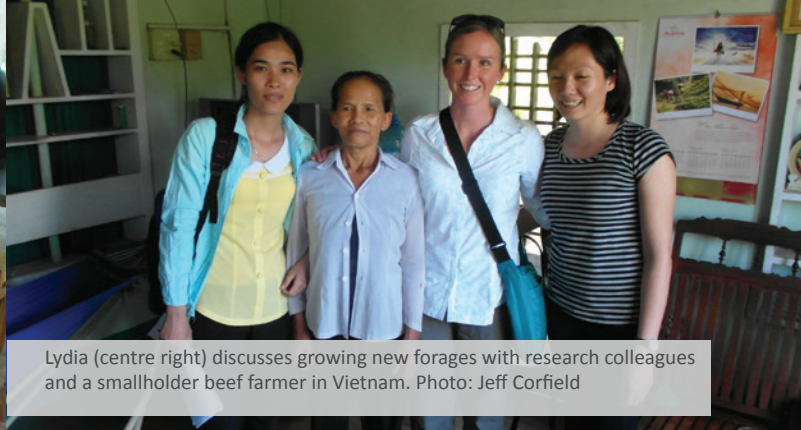
Increasing the value of these animals and, in turn, increasing farmer income, said Katherine, will lead to improved livelihoods for the rural poor.

"There's a lot of change going on here in Cambodia at the moment with regard to development. It's an exciting place for me to be right now," she said.

"I'd strongly recommend that others apply to become Scholars and go to the Conference; it's a fantastic opportunity for young scientists. The Scholars program is unique and engaging — I wish I could do it again!"



Lydia (front right) with farmers and colleagues in Vietnam, where women play an important role in managing cattle. Photo: Jeff Corfield



Lydia (centre right) discusses growing new forages with research colleagues and a smallholder beef farmer in Vietnam. Photo: Jeff Corfield

## LYDIA TURNER, TASMANIA

For a mother of three, getting involved in international development seemed out of reach.

**F**or Tasmanian researcher and mother-of-three Lydia Turner, the promise of getting involved in international development had seemed just beyond reach until 2014.

“I’d always had an interest in international development since choosing to pursue agricultural science in my undergraduate degree, but I hadn’t yet found my opportunity or found out how to get involved in that work,” said Lydia.

“But 2014 was really my chance to change from just doing research based here in Tasmania to broadening out into that space in developing countries — a world I hadn’t been able to ‘tap into’ previously,” she says.

Lydia finished her PhD in dairy-pasture agronomy in 2006, and has been working since then at the Tasmanian Institute of Agriculture Dairy Centre.

“When I applied to attend the Crawford Fund Conference, I’d only just become involved in an Australian Centre for International Agricultural Research (ACIAR) project in Vietnam, so I was keen to network with as many people as I could,” she said.

This ACIAR project aims to develop productive and profitable smallholder beef enterprises in Central Vietnam. Lydia’s role in the project is to focus on the extension process through social

research to understand how and why farmers adopt different practice recommendations.

“Despite my involvement in this work in Vietnam, I still had an idea that you needed to have a certain level of experience and expertise before you could be considered seriously for international development work,” Lydia said.

But the Crawford Fund scholarship helped her see this wasn’t true.

**“The Conference taught me to not just sit back and wait for opportunities to come along, but to seek them out and make the most of the opportunities I already had.”**

“Being a scholar didn’t change my research direction — rather, it made me more determined to be proactive and gave me the confidence boost I needed to seek knowledge out.”

“It helped me see that my area of expertise in agricultural extension will be greatly needed in the future,” Lydia said. “Such extension will bring about real, on-farm change, so smallholder farmers can maintain their livelihoods in countries like Vietnam.”





Tara in Munnar, India.  
Photo supplied by: Tara McKenzie



Tara at a workshop in Fiji with Livai Tora from the Pacific Agribusiness Research for Development Initiative breadfruit project. Photo: ACIAR

## TARA MCKENZIE, QUEENSLAND

For Tara, the connection between food security and food waste is a crucial one.

**A**fter completing undergraduate research in post-harvest horticulture in the South Pacific, Tara began an honours degree at the University of the Sunshine Coast in 2014. Her focus is on harvest losses and waste in the horticultural supply chains of developed versus less developed countries.

In the same year, Tara attended the Crawford Fund Conference hoping to learn more about how food security and horticultural waste are being addressed on a global stage.

“The Conference covered these areas from many perspectives, and gave reasonable solutions to feeding the world’s people — we know the problem is very complex, but the conference renewed my faith that something can and is being done to address it,” Tara said.

“Chief Executive of Oxfam Australia Dr Helen Szoke was particularly inspiring because she talked of a more attainable solution — of simply wasting less.”

“She talked about threats to agriculture due to land constraints, rising input costs and changing climate, and that 80% of the world’s hungry people are involved in food production in some way. It’s vital these things are considered if there’s hope to improve people’s livelihoods and quality of life,” Tara said.

“People of the South Pacific face immense and unique challenges in this way, and I want to help implement solutions in their communities.”

Tara grabbed an opportunity to help, in April 2015, by deferring her honours studies to take up a graduate research officer position with the Australian Centre for International Agricultural Research (ACIAR) in the South Pacific.

The position has led to Tara playing a vital role in the ACIAR-funded Pacific Agribusiness Research for Development Initiative. This has given her the chance to make valuable connections with stakeholders in the Pacific region and contribute to planning phase two of the initiative.

“The job is right up my alley, and so far it’s been fantastic. It has given me the kickstart to a career in the field that I’m so passionate about,” said Tara.

“I really do think being a Crawford Fund Scholar helped me gain this opportunity.”



Zita (right) with Mark Hallett from Dago Dairy in Lembang, Indonesia. Photo: John Moran



Zita facilitating a workshop with dairy advisors in West Java, Indonesia, to help build the capacity of the regional dairy industry. Photo: Risti Permani

## ZITA RITCHIE, GARDINER FOUNDATION

Zita is passionate about the role of smallholder farmers in global food security.

“When I think about the question of food security, I think about how we can involve smallholder farmers in the solution,” Zita said.

The best way to go about it, she said, is through capacity development of smallholder farmers in their own countries, “by working out solutions that work for them.”

Zita spoke just two days after arriving back in Australia from a trip to Lembang, in the West Java province in Indonesia, where she was training Indonesian advisors who work directly with smallholder farmers, to help build the capacity of the West Javan dairy industry.

The trip was a spin-off of being a Scholar in the Crawford Fund program in 2014.

“When I started a degree in animal and veterinary bioscience at the University of Sydney, I wouldn’t have thought that it would open up so many opportunities for me in agriculture. It is a very dynamic and interesting area,” she reflected.

“I love working with farmers. You don’t even have to be working with farmers to be in agriculture, either. There are so many different facets of agriculture, and it is really what underpins every economy.”

Zita has worked for the Victorian government as a dairy extension officer for five years, and is completing a master’s in international development.

Being a part of the Scholar program in 2014, with the support of the Gardiner Foundation, has opened up her working world tremendously.

“Hearing speakers at the Conference made me look into internships with organisations like the United Nations World Food Programme.”

“It has inspired me to look a lot more at opportunities outside Victoria, and outside Australia.”

“I am now even more keen to pursue this line of work.”

Zita is also now the Victorian representative of the Australian-based Researchers in Agriculture for International Development network, which brings together early- to mid-career scientists with an interest in agricultural research in developing countries.

## MEET OUR ALUMNI

### Past Crawford Fund Conference Scholars

#### 2010

Audrey Leo, VIC  
Dianne Mayberry, QLD  
Felicity Anderson, NSW  
Joshua Telfer, SA  
Kai Lin Ek, NSW  
Larissa Schneider-Guilhon, ACT  
Lee Hickey, QLD  
Mel Rae, TAS  
Michelle Knight, ACT  
Rowena Long, WA  
Sam Henty, WA  
Tim Heath, SA

#### 2011

Anthony Leddin, VIC  
Dominic Jenkin, QLD  
Felicity Cox, NSW  
Hannah Thompson, TAS  
Jay Anderson, QLD  
Joshua Scandrett, TAS  
Kathy Schneebeli, ACT  
Md Alamgir, SA

Niloofer Vaghefi, VIC  
Noel Knight, QLD  
Norshamliza Chamhuri, WA  
Sebastian Campbell, NSW

#### 2012

Alex Tillack, QLD  
Ben McGowan, VIC  
Casey Doolette, SA  
Clare Kerr, ACT  
David Gale, NSW  
Felicity Shonk, NSW  
Gavin Livingston, TAS  
Imogen Goode, VIC  
Johanna Christensen, VIC  
Kaylia Cameron, TAS  
Kelly Ryan, WA  
Laura Watson, ACT  
Madaline Healey, QLD  
Michael Tarbath, TAS  
Rebecca Jenkinson, WA  
Sarah Noack, SA  
Stephanie Fowler, NSW

#### 2013

Berenice Della Porta, VIC  
Ehsan Tavakolli, SA  
Gabrielle Ho, ACT  
Liam Ryan, WA  
Melinda Judge, WA  
Melissa Cook, VIC  
Nicole Reineker, TAS  
Rachel Walker, NSW  
Reanna Willis, QLD  
Rhys Pirie, NSW  
Simon Yeap, WA  
Stuart Irvine-Brown,  
Zoe Creelman, NT

#### 2014

Aaron Preston, NSW  
Alison Hall, TAS  
Amy Vos, QLD  
Anne Warren, ACT  
Brendan Brown, SA  
Cassie McMaster, NT  
Danielle Gale, WA

Georgina Coggins, NSW  
Heather Feetham, SA  
Jade Chan, QLD  
James Manson, VIC  
Jenny Hanks, VIC  
Jessica Bogard, QLD  
Julia de Bruyn, NSW  
Julia Smith, WA  
Katherine Ashley, NSW  
Kirsty McCormack, NSW  
Lydia Turner, TAS  
Mardee Cassin, NSW  
Rowan Alden, NSW  
Sarah von Bronswijk, ACT  
Soumi Mukhopadhyay, ACT  
Tara McKenzie, QLD  
Temma Carruthers-Taylor, ACT  
Yi Zhou, SA  
Zita Ritchie, VIC

# NETWORKING

## MORE WORDS FROM SCHOLARS

“The discussions with students from Africa and Australia were very inspiring – so much so that it has motivated me to pursue post-graduate study in agricultural science.”

LAURA WATSON

“Honestly, attending the Crawford conference in 2012 was one of the best opportunities, which has ultimately led to where I am now.”

MADALINE HEALEY

“The major benefit for me from attending the conference was the opportunity to meet other like-minded people working on international agricultural research projects.”

TIM HEATH

“Being a scholar was a very valuable experience. It enabled me to understand more about the role that Australian agriculture and R&D can play in global food security issues.”

MEL RAE

“It was very good to meet people in the policy arena who make critical decisions, which then filter down to enable researchers to carry out their science at grass roots level.”

STUART IRVINE-BROWN

“It was exciting to talk to both those in established careers and those starting out – to discover different aspects of the food security problem and how people are tackling it.”

ANNIE WARREN

“The conference enlightened me to the variety of exciting careers that can be pursued in international agriculture and research.”

HEATHER FEETHAM

“Attending the conference was an exhilarating experience. It greatly boost my confidence and awareness in my studies and career goals.”

SIMON YEAP



**THE CRAWFORD FUND**

*For a Food Secure World*

The Crawford Fund is a non-profit non-government organisation that works to raise awareness of the benefits to Australia and developing countries from international agricultural research.

The Crawford Fund  
Level 3/10 National Circuit, Barton  
MAIL: PO Box 4477  
Kingston, ACT 2604  
Australia

Phone: +61 (2) 61884370  
Email: [crawford@crawfordfund.org](mailto:crawford@crawfordfund.org)  
Web: [www.crawfordfund.org](http://www.crawfordfund.org)  
Twitter: @CrawfordFund  
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