

Quality student program cultivates next generation

Quality researchers are essential for the future of sustainable agriculture in Australia. The Future Farm Industries CRC's *Postgraduate Development Program* (PDP) has played a key role in ensuring the continuity of research and fostering the next generation of researchers.

The Program started in the former Salinity CRC during 2002 and then transferred to the Future Farm Industries CRC. A key feature of the Program is it recognises the need for graduates to apply their research skills as soon as their studies have finished – to be 'industry ready'.

The Program's objectives despite the transition have provided all (CRC) postgraduates with:

- An opportunity to gather annually
- Financial assistance to attend conferences
- Financial assistance to enhance professional development.

Building networks

Future Farm Industries CRC Education Manager, Daryll Richardson explained that the CRC postgraduate annual gatherings have been a central element of the Program.

"During these gatherings, postgraduates participate in a range of formal and

key points

- The Future Farm Industries CRC Postgraduate Development Program has provided a myriad of opportunities for participating students to develop skills and networks for a future in agricultural research
- The Program provides participants with mentoring and financial support while building a sound network of professional support
- Since its inception during 2002, 117 postgraduate researchers from 11 universities have participated in the Program.



By Jill Griffiths
Kondinin Group

informal activities designed to increase their professional skills, give insight into other CRC research activities, develop knowledge of issues affecting Australian agriculture, and build their professional networks," Daryll said.

Many postgraduates cite these events as the highlight of being a CRC postgraduate.

"These opportunities allowed me to develop confidence in presenting my research, learn from other students about up-to-date salinity research activities and results. I was very conscious at this time that I was part of a growing network of future scientists who would provide the generation of knowledge to manage such a significant natural resource management issue in Australia as salinity."

DR ANNA DUTKIEWICZ (2003-2007:
THE UNIVERSITY OF ADELAIDE).

"...perhaps the most enjoyable aspect of the Program was the annual student meetings from which I have established many long-term friendships and professional relationships with other early-career researchers... the meetings provided a great opportunity for me and my fellow postgrads to learn about the other research being conducted within the CRC, discuss and lament everyday problems and issues, as well as engage in argument and thinking on many contemporary global issues."

DR LINDSAY BELL (2002-2006: THE UNIVERSITY
OF WESTERN AUSTRALIA).

According to Daryll, the annual event is essential for establishing 'connections' among the postgraduate group, exposing them to CRC research occurring outside their own discipline and providing opportunities to engage with senior CRC researchers.

He said; "Meetings are planned to maximise opportunities to meet CRC and non-CRC scientists and are timed, where possible, to coincide with other planned CRC activities."

Attending conferences

Postgraduates are encouraged to attend national and international conferences based on themes relevant to the CRC's mission. Conference attendance exposes postgraduates to both the scientific and broader communities.

"Here students have the opportunity to present their work and learn about other relevant research," Daryll said.

Conference attendance has been a significant and well funded component of the Program.

"Financial support throughout my candidature was generous, allowing me to travel, attend and present at national and international conferences, which were integral experiences in my early scientific career. I feel that all these benefits of the PDP add up to provide me with a substantial base of skills, knowledge, support and experience that may not have been available to me as post-graduate researcher elsewhere."

DR MELISSA MILLAR (2004-2008: THE UNIVERSITY
OF WESTERN AUSTRALIA).

"...with support from the CRC I have presented my research at student meetings, attended and presented at conferences, both nationally and internationally and most recently, communicated my work to a broad audience at the CRCA conference in Canberra. This experience has encouraged me to network with other students and scientists from across Australia and has provided an invaluable opportunity to reflect on my research outcomes and the future direction of my project."

MELISSA FRASER (2005 - ONGOING: THE UNIVERSITY
OF ADELAIDE).



ABOVE: Annual gatherings allowed students to develop strong connections and share their experiences. Back row left to right: Kim Brooksbank (UWA), Wendy March (CSU), Cathy Waters (CSU), Nikki Mouat (UWA) in front of Maggie Raeside (CSU), Sarah Rich (UWA), Justin Hughes (CSU), Richard Bennett (UWA). Front row left to right: Robyn Whipp (CSU), Daryll Richardson (CRC), Eleftheria Dalmaris (UWA), Sommer Jenkins (UWA), Lori Kroiss (UWA). (Photo: Random bushwalker)

“...the CRC awarded me a travel grant to attend the Australian and New Zealand Society of Animal Production (ANZSAP) conference in Brisbane. Here I was able to meet key researchers in my research area, pick their brains for some good ideas and most importantly, develop contacts for future research. It was a fantastic trip that inspired me to keep working hard and focus on my career aspirations.”

CATHERINE GULLIVER (2008 - ONGOING: CHARLES STURT UNIVERSITY).

Well represented

At the Second International Salinity Forum in Adelaide during 2008, there were 45 CRC postgraduate delegates registered for the event of a total of more than 400, (slightly more than 10 per cent of the total delegate list). Postgraduate researchers presented 19 oral papers and five posters and took out the



best two oral presentation awards (Richard Bennett, Nikki Mouat) and the best poster (Bree Wilson), also making a significant contribution to Forum outcomes.

Postgraduate research has been presented on behalf of the CRC at events all around the globe with the support of the Program. Papers have been presented at 25 international conferences in Europe, Asia, North and South America, New Zealand and South Africa. With CRC support, 67 papers and posters have been presented at national conferences across all Australian states.

Professional development

Postgraduates are given opportunities to participate in CRC-organised professional development. While participation is voluntary and a small number of postgraduates have chosen not to become involved, the participation rate has been greater than 80%.

“Topics for workshops vary greatly and are selected based on advice from senior CRC researchers in terms of the skills required by emerging scientists,” Daryll said.

“Participants also provide feedback on the types of training activities they believe will enhance their professional development.”

Past workshop topics have included; intellectual property, leadership skills, communication skills, project management, conflict resolution, getting your paper published, ‘Salty Business’/‘Future Farm Business’, job seeking skills, interview skills, working with the media, and ‘PowerPoint anarchy’.

Support has also been provided to individual postgraduates for other activities, such as statistical analysis and scientific writing courses.

Considerable contribution

While the intent of the Program is to ensure graduates are industry ready, postgraduate research carried out to date has contributed greatly to a range of wider CRC activities. PhD research is an important element in the overall output of the CRC, with many postgraduate researchers having links to larger CRC projects (for example, *EverGraze*[®] and *INFFER*[™]).

The knowledge generated by individual projects contributes to overall project outcomes, and to CRC intellectual property.

CRC project teams also capitalise on and enhance the contribution of postgraduate research by recruiting students for specific projects.

“Where possible, PhD researchers are embedded in larger projects, enabling them to contribute to broader research outcomes, while developing teamwork and communication skills,” Daryll said.

LEFT: Carrying out a PhD in a supportive environment has been critical to the Program’s success according to current student Richard Bennett. (Photo: Lalith Suriyagoda, FFI CRC PhD Student)

Elements of success

Since the Program started during 2002, 117 postgraduate students from 11 universities have participated. Students have come from almost all disciplines in the agricultural research sector. Of those enrolled between 2001 and 2003, the completion rate is 78%. Four students (11%) are currently enrolled and another four withdrew during the first two years of the PhD Program.

The figures compare favourably with a national study* of postgraduates that showed only 53% of students completed their studies after eight years.

The impressive success rate of the Future Farm Industries CRC PhD Program is at least partly due to the fact that ongoing involvement with the CRC gives postgraduates support from outside their institutions. Postgraduates have access to advocacy and additional guidance not necessarily available in a more traditional postgraduate environment.

“One of the most important things for me has been the peace of mind that comes with knowing that there is an advocate in Daryll if anything goes askew with my institution (or anything else for that matter). Luckily, I haven’t really needed to draw on this, but it’s nice to know the support is there.”

SERENITY HILL (2008 - ONGOING: THE UNIVERSITY OF MELBOURNE).

“On the whole, the CRC PDP experience of working together in team-building exercises, networking with fellow postgraduates and researchers and opportunities to learn about the research and administration that makes up the CRC has given me a sense of belonging to a large research team that is working on a common cause. This is one impact of the PDP that stands out for me – the development of a sense of purpose and a sense of place within a large research team – and this has been an incredibly valuable source of motivation for my PhD and future career.”

RICHARD BENNETT (2006 - ONGOING: UWA). ↘

More information

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> *Martin, Y. M., Maclachlan, M. and Karmel, T. 2001. Postgraduate completion rates. Canberra: Department of Education, Training and Youth Affairs. (quoted in Richardson, see below)

All student quotes taken from: Impact of the Future Farm Industries CRC’s Postgraduate Professional Development Program, prepared by Daryll Richardson. <