Dr Natasha Teakle
School of Plant Biology and Centre for Ecohydrology, UWA

Dr Teakle grew up on a farm in the wheatbelt town of Cunderdin. She has always been interested in helping with the salinity problem.

She did my BSc in agriculture at UWA and completed her PhD at UWA in 2008. Her doctoral research involved studies of salinity and waterlogging tolerance in perennial Lotus species.

Dr Teakle joined the Centre for Ecohydrology in January 2007. Natasha’s current position as a Research Scientist with the Centre for Ecohydrology focuses on developing saltland pasture systems for productive and sustainable rehabilitation of saline land.

At the end of last year she was one of 13 industry winners of the Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry 2009. She won the Australian Meat Processor Corporation (AMPC) award.
2010 Industry Forum

Mastering the future of postgraduate agricultural education

Natasha Teakle
Centre for Ecohydrology and School of Plant Biology
Outline

• My background and interest in Agriculture
• BSc Agriculture UWA
• PhD in Plant Biology
• Life after the PhD
**Cunderdin: farming background**

- 2 hours east of Perth
- Wheat and sheep
- Third generation farmers
- ~9500 acres cropped (half leased land)
- ~1500 ewes
Salinity problem
BSc in Agriculture
The University of WA

- WHY?
- My expectations and how they changed
- Highlights and lowlights
- 4th year honours critical
BSc in Agriculture

4th year honours project critical

• Practical scientific skills
• Critical thinking
• Communication skills
• Industry supervision
• Outcome: development of students ready for employment
• Student transformation observed as supervisor
After the BSc Ag: Research officer

- Job opportunity from honours project
- State Biotechnology Centre (DAFWA, Murdoch Uni)
- Molecular markers for improving wheat quality
- All research officers and technical staff female
- *Highlighted the need for a PhD to advance in research*
PhD in Plant Biology

- WHY?
- Expectations and how they were met
- Highlights and lowlights
- Collaborations essential
PhD in Plant Biology

- Salt and waterlogging tolerance in perennial *Lotus*
- Industry supervisor – links created
- Salinity CRC affiliation
- International experience – creating contacts and skills development
University of Glasgow, Scotland

- 12 months research
- Molecular biology training
Lotus tenuis in Argentina

- Different farming systems
The Postgraduate Experience

• Research training, skills development #1
  – But in reality publications essential for future employment in research
• FNAS networking: e.g. seminars, Rotto summer school, IOA Postgrad forum
• Industry exposure critical
  – Perspective and future employment
• Reasons for doing a PhD vary greatly and this impacts on the experience
Life after PhD

• Current position: 3 year post-doc Centre for Ecohydrology with Ed Barrett-Lennard and Tim Colmer
• Salt and waterlogging tolerance in pastures
• 8 wks/yr teaching at Univ. Sydney
• Industry and international collaborations

Melilotus siculus, ‘Messina’
• Daniel Real, FFI CRC/DAFWA
• Phil Nichols, FFI CRC/DAFWA
• Andy Craig, FFI CRC/SARDI
• Andre Lauchli, UC Davis
• Brian Atwell, Sydney
• Lindsay Campbell, Sydney
• Steve Tyerman, Adelaide
• Mark Tester, Adelaide
• Matt Gilliham, Adelaide
• Sergey Shabala, Tasmania
• Maren Friesen, USC Los Angeles
• Andre Lauchli, UC Davis
• Erik Von Wettberg, Miami
• Ole Pedersen, Copenhagen Denmark
• Tim Flowers, Sussex UK
• Anna Amtmann, Scotland
Life after PhD

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- Industry and international collaborations
- Outreach work e.g. SIS, Women in Science

Melilotus siculus, ‘Messina’
Kununurra Women in Science Tour with WA Chief Scientist Lyn Beazley
Future for agricultural education - BSc

• Attracting different types of students
• Industry experience component
• Students need to be treated as paying customers!
• *Employment-ready undergrads priority*
Future for agricultural education

- Postgraduate

- Finding good students and being able to pay them competitively
- Linking international students with local industry
- Lack of local employment opportunities post-PhD may affect enrolments
Conclusion

• Overall very positive postgrad experience in agriculture

• *Key reasons:* *industry and international collaborations*