



## Economics & Business » Careers in Primary Industries

To remain a world leader in agricultural growth and development, we need economics and business professionals to identify emerging markets, engage with local, national and international customers, trade commodities and conduct economic analysis for industry.

There are endless employment opportunities in our primary industries regardless of your qualifications and experience. Likewise a successful background working in our primary industries sector can lead to many other exciting and unexpected career pathways.

Economics and business careers with NSW Department of Primary Industries (DPI) include:

- » Economists
- » Financial Officers
- » Business Analysts
- » International Engagement Officers.

*Over the page, see the story of Fay Haynes, DPI Senior Project Officer, International Engagement.*



Department of  
Primary Industries

“There are so many career opportunities for students and young people in agriculture. Dare to dream. You never know what opportunities will present themselves.”



**Dr Fay Haynes**

Senior Project Officer, International Engagement

Growing up in Clifton, a small country town on the Queensland Darling Downs, I acquired a strong interest in agriculture at high school. After completing a Bachelor of Science (Animal Production) at the University of Queensland Gatton Agricultural College, I moved to the St Lucia Campus of the university to undertake an honours year.

My career started in the cotton industry where I worked for a large cotton grower and merchant. An interest in animal nutrition led to a position with a beef nutrition company, which involved working with beef and dairy producers throughout the country.

A scholarship from the Sheep Cooperative Research Centre (CRC) provided the opportunity to pursue my PhD in animal genetics at the University of New England. After completing the PhD I continued work with the Sheep CRC before starting at Charles Sturt University as a lecturer in statistics and agribusiness systems. During this period my interest grew in international trade.

My role now is Senior Project Officer, International Engagement with DPI, working with agricultural industries to support their activities for export and/or foreign investment trade opportunities.

I provide technical research and development expertise to the agriculture industry to gain market access and participate in international trade missions. My portfolio includes horticulture, fibres and animal genetics; while DPI team members work with other industries.

I love my job as it requires interacting with a huge range of people with similar interests and career objectives, both within DPI, and industry. It also provides an opportunity to make a significant contribution to improving the productivity of agriculture in Australia.

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## Research & Development » Careers in Primary Industries

Research and development (R&D) underpins all aspects of food and fibre production. The development of new concepts and technologies ensure we remain a productive, profitable and sustainable industry.

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R&D careers with NSW Department of Primary Industries (DPI) include:

- » Soil Chemists
- » Entomologists
- » Research Scientists
- » Laboratory Technicians.

*Over the page, see the story of Col McMaster, R&D Agronomist, DPI.*



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“Agriculture is more than it appears. Science, technology, research and development are increasing demand for young, innovative and forward thinking people.”



**Col McMaster**

Research & Development Agronomist

Growing up on my family property west of Parkes I have always had an interest in agriculture. This interest led me to undertake a Bachelor of Farm Management through the University of Sydney. I then gained a role with a soil consultant in Orange who employed me while I studied a Bachelor of Science (Agronomy) through Charles Sturt University. The opportunity to study while employed in the industry was great as I was able to correlate my theoretical learning with the practical and vice versa.

Upon completion of my agronomy studies I was employed by DPI as a project officer on a Healthy Soils project before becoming a Farming Systems Agronomist and then a District Agronomist based in the Forbes area. In these roles I developed practical experience in crop agronomy, farm systems management, relationship building and stakeholder engagement which are integral in my current position as a Research and Development Agronomist.

In this role, I work with industry to identify limitations to crop productivity and profitability and where improvements can be made through hands-on cropping trials and data collection. I work on a variety of projects including researching the impacts and implications of frost to cropping systems, relationships between profit and crop nutrition, variety-specific agronomic packages and canola growth and profitability. As part of each of these research projects I prepare, develop and maintain trial plots and collect data and statistics throughout the trial periods. I then deliver up-to-date research findings to farmers, advisers and fellow scientists through research reports, field days and conferences.

I love the rewarding relationships I build with farmers and industry, as these relationships are imperative to the future growth of agriculture. I enjoy helping farmers with their decision making while they provide me with feedback and questions which often influence our future research.

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## Comms & Media » Careers in Primary Industries

Primary Industries needs skilled communicators to share information and ideas, deliver engaging media campaigns and lead the way in communicating agricultural research, ideas and visions to the community.

There are endless employment opportunities in our primary industries regardless of your qualifications and experience. Likewise a successful background working in our primary industries sector can lead to many other exciting and unexpected career pathways.

Comms and media careers with NSW Department of Primary Industries (DPI) include:

- » Public Affairs Officers
- » Communications Officers & Analysts
- » Stakeholder Engagement
- » Graphic Designers.

*Over the page, see the story of Mel Hamling, DPI Communications Coordinator.*



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“The world needs food!  
Young people can bring  
innovation to the sector, via  
digital and electronic advances  
or new thinking for age-old  
challenges.”



**Mel Hamling**  
Communications Coordinator

My career as a news journalist was launched after studying a Bachelor of Communication (Broadcast Journalism) at Charles Sturt University.

Presenting on television and radio I developed skills to communicate effectively, respond quickly and problem solve.

Moving into public relations and consulting roles, I adapted my skills base as communications technologies developed.

This experience led to my current role as Communications Coordinator for DPI. I'm involved in the implementation of internal and external communications strategies including scripting media messages, industry-specific fact sheets, preparing briefings for parliament and developing ministerial and departmental media releases.

I coordinate digital communications to enhance DPI's profile and deliver a range of communications over a variety of new digital media channels. This involves

liaising with DPI staff, stakeholders, the Minister's Office and media outlets to ensure the relevance and authenticity of our communications.

I love the variety of my role, working with a team to deliver effective staff and stakeholder communications, and particularly enjoy helping to share stories of DPI's innovative work.

New technologies will assist primary industries workers to forecast risk factors and bring huge career opportunities in sustainable land- and water-based farming practices.

Don't rule out any job that may not fit your wish list straight away; any position you accept can add to your skill set and gives leverage for new roles.

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## ICT (Info & Comms Technology) » Careers in Primary Industries

Primary Industries are at the forefront of technological advancements which makes it an exciting and innovative industry for ICT professionals.

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ICT careers with NSW Department of Primary Industries (DPI) include:

- » IT Technicians
- » GIS Specialists
- » Systems Developers
- » Web Content Developers.

*Over the page, see the story of Elizabeth Warden, DPI eCommunications Officer.*



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“Agricultural education provided a foundation for tailoring my career into what I enjoy.”



**Elizabeth Warden**

Senior eCommunications Officer

A soil carbon research project gave me a foot in the door to a career in Information and Communications Technology.

After completing a Bachelor of Science (Resource and Environmental Management) with Honours from Australian National University, I started working with DPI as a technical officer on a soil carbon research project.

This led to a place in the DPI Graduate Program, resulting in a position in the DPI Communications and Stakeholder Engagement team.

I developed skills working with various communication channels, including social and traditional media, and this led to my current position as Senior eCommunications Officer.

In this role I help manage online communications and support the organisation to integrate and work with new and emerging online technologies.

DPI has a number of websites and uses a variety of online communication technologies. This keeps the job interesting and means there's always something new to explore and learn.

It's important to be able to work as part of a team, and be open to new opportunities, learning new skills, and increasing your knowledge base.

My understanding of rural industries has helped significantly in working with people across DPI and the broader agricultural sector. The knowledge and skills I developed, particularly in studying science, have helped me get where I am today.

I love the variety of working on different subject areas, with different people each day. Having many projects on the go makes work life very interesting!

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## Trades & Skills » Careers in Primary Industries

Agriculture relies on skilled individuals with the training and experience to undertake and manage specialist as well as everyday tasks to produce the food and fibre we need for life.

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**Skills and trades careers with NSW Department of Primary Industries (DPI) include:**

- » Technical Assistant
- » Non Graduate Lecturer
- » Farm Assistant/Manager
- » Support Officer.

*Over the page, see the story of Ian Nunan, Non Graduate Lecturer, DPI Tocal College.*

“There are great experiences and opportunities available to anyone who pursues a career in Agriculture. Once in agriculture, doors will open!”



**Ian Nunan**

Non Graduate Lecturer, Tocal College

I grew up in Newcastle and my parents owned a small cattle property near Gloucester, so we went there as often as we could. After school I completed a Tocal Certificate in Agriculture and Tocal Advanced Certificate in Agriculture (now Certificate III & Certificate IV in Agriculture) at Tocal College.

Following graduation I worked as a jackaroo or farm/station hand on a number of sheep and cattle properties before becoming overseer on a large mixed farming property near Warren where they run cattle, a merino stud and also some cropping. I then did a lot of fencing during the construction of one of the big thoroughbred studs in the Upper Hunter before returning to Tocal College as a dairy assistant. From this role I was promoted to Dairy Manager and decided to pursue my interest in agricultural education completing a Certificate IV in Training and Assessment.

Running a variety of Profarm short courses developed my passion for teaching and I soon gained my current position as Non Graduate Lecturer. This is a diverse role and

involves teaching agricultural skills to full time students, running the total catchment management tour of the Macquarie Valley, coordinating the Working in Industry careers unit and being an advisor to a group of students who I help guide through their course.

You need to have a thorough understanding of agricultural industries, excellent teamwork, communication, organisational and mentoring skills as well as the ability to connect with young people to be successful in a role like this. While working in this role I have completed a Diploma in Agriculture.

I love the variety in my work and being able to pass on the skills and knowledge I've gained in the industry to the next generation of agricultural professionals. I still undertake hands-on work and use the skills I've developed as well as instructing students in these skills.

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## Engineering & Maths » Careers in Primary Industries

The world and the industries within it are constantly changing. Engineers and mathematicians respond to the questions of what's possible; they help improve efficiencies in primary industries, and better manage our resources.

There are endless employment opportunities in our primary industries regardless of your qualifications and experience. Likewise a successful background working in our primary industries sector can lead to many other exciting and unexpected career pathways.

Engineering and maths careers with NSW Department of Primary Industries (DPI) include:

- » Statistician
- » Biometrician
- » Irrigation Specialist
- » Mechanical/Trade Engineer.

*Over the page, see the story of Craig Boys, Research Scientist and Leader, DPI Freshwater Ecosystems.*



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“Diversify your studies. There are huge opportunities available to those willing to be interdisciplinary.”



**Dr Craig Boys**

Research Scientist, Freshwater Ecosystems

I grew up in Sydney and studied a Bachelor of Applied Science with Honours in Animal Physiology at the University of New South Wales. Working at the Port Stephens Fisheries Institute I found an interest in fisheries and completed a PhD in Applied Science (Fish Ecology) at the University of Canberra.

In my current role as Research Scientist and Acting Research Leader Freshwater Ecosystems, I manage a research team and work on a variety of research projects including habitat rehabilitation, environmental management and improving the design and operation of river infrastructure to promote safer fish passage. Many of these projects incorporate an understanding of both aquatic ecology and hydraulic engineering. One such collaborative project was nominated for the Innovations and Inventions category at the Engineering Excellence Awards Sydney.

There are unlimited opportunities available to those willing to work interdisciplinary, for example obtaining training in both ecology and engineering.

As the world attempts to deal with water scarcity and climate change there's a huge push to install more weirs, dams and hydropower. Sustainability of fisheries can be negatively affected if infrastructure isn't designed to minimise impacts on migrating fish.

Ecologists with an in-depth understanding of hydraulic engineering and vice versa are highly employable and sought-after worldwide.

I love the relationships I build with my peers across Australia and beyond, and the reward of knowing I'm doing my bit to leave the environment in a better place for future generations.

My advice: don't be too concerned that your initial field of study is necessarily what you will end up doing throughout your entire career. You can develop the skills to be an effective researcher in many different ways. I started out researching the salivary glands of kangaroos and ended up as a fish ecologist!

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## Environment & Sustainability » Careers in Primary Industries

Australian agriculture continues to improve management practices that impact on the sustainability of our scarce physical resources and deliver better environmental outcomes.

There are endless employment opportunities in our primary industries regardless of your qualifications and experience. Likewise a successful background working in our primary industries sector can lead to many other exciting and unexpected career pathways.

Environment and sustainability careers with NSW Department of Primary Industries (DPI) include:

- » Land Use Planners
- » Irrigation Specialists
- » Natural Resource Managers
- » Climate Change Researchers.

*Over the page, see the story of Carlie Darling, Program Coordinator, Sustaining the Basin-Irrigated Farm Modernisation Program (STBIFM).*



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“This type of work takes a broad range of skills, you need to be flexible, willing to learn and have excellent communication skills.”

I studied psychology and began my career as an academic, tutoring and lecturing in psychology and working as a Research Assistant while completing my PhD in Psychology (neurophysiology) at the University of Wollongong.

I went on to pursue a post-doctoral fellowship in Neurophysiology for the University of Newcastle before being offered a Program Coordination role for a state-wide rural mental health program. My time in this role gave me an excellent foundation in program coordination and management which led to my current position as Program Coordinator of Sustaining the Basin: Irrigated Farm Modernisation Program (STBIFM).

STBIFM aims to achieve water savings by improving on-farm water use efficiency and reduce the direct extraction of water from water management areas. This program will improve the long term sustainability of regional communities by allowing irrigators to adapt to reduced water availability and update irrigation infrastructure.



**Dr Carlie Darling**  
Program Coordinator STBIFM

As Program Coordinator I work closely with the management team to manage and assist with program implementation tasks.

For a role like this you need excellent skills in communication, financial management and reporting, project management and stakeholder activities and logistics.

This role has been quite a challenge, being so different to my initial field of study. I often find myself in a foreign environment as a new project evolves, but my skills are integral to bringing that project to life.

Working as a Program Coordinator for DPI has provided me with a wealth of opportunity in a dynamic work environment. I love the diversity of my role and the challenges it brings.

The workload is high volume and requires meticulous attention to detail. This can mean the job is high pressure at times, but it keeps life interesting!

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## Scientific Research » Careers in Primary Industries

Scientific researchers undertake strategic research which underpins the growth, sustainability and biosecurity of agriculture and fisheries in NSW. Researchers have expertise in a range of fields including ecology, genetics, biology, physiology, pathology, and climate.

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Scientific research careers with NSW Department of Primary Industries (DPI) include:

- » Research and Innovation Officer
- » Aquatic Ecologist
- » Biodiversity Research Officer
- » Research Pathologist

*Over the page, see the story of Amy Smoothey, DPI Fisheries Research Scientist.*



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“To succeed in a career you need drive, enthusiasm and a willingness to go above and beyond what’s required. Where possible volunteer on research projects – the experience will pay off.”



**Dr Amy Smoothey**  
Fisheries Research Scientist

Countless hours spent snorkelling, scuba diving and fishing with my family and friends in a coastal suburb of Sydney formed my fascination with all things marine.

In 2000 I commenced a Bachelor of Marine Science at the University of Sydney, which I completed with Honours in 2004. I attained my PhD from the University of Sydney in 2008 for research on the ecology of harvested turban snails on intertidal and subtidal rocky reefs. (I was building up to tagging Bull Sharks!)

Throughout these studies I worked casually for DPI on various recreational angling research projects until 2009. Following a shark attack in Sydney Harbour that year, I transferred my marine ecology experience to shark research.

My research interests have focused on understanding, through the use of carefully designed experiments, the movements, distribution and abundance of animals.

More recently, I’ve coordinated research projects to understand aspects of the biology and ecology of commercially and recreationally harvested sharks, particularly Bull Sharks in estuarine and coastal waters of NSW. This research will provide scientific-based guidelines for minimising the risk of shark attacks within Sydney Harbour and the east coast, as well as some of the necessary information to ensure species in NSW are managed in an ecologically sustainable way. Another aspect of my role is to assist with the investigation of shark bites, by determining the species and size of shark responsible for the incident.

This work is dynamic, it’s not 9 to 5. Sharks are active around the clock and I travel to tag them based on their seasonal movements. My workdays are unpredictable and variable. While I spend many hours outdoors, the job also requires a lot of maths and report-writing. My role involves representing DPI in the media to educate and inform the public on being ‘SharkSmart’ – one element of our Shark Management Strategy.

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