

Career Pathways Guide

for the vegetable industry





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Introduction to the Vegetable Industry

The Australian vegetable industry is part of the broader horticultural industry which is worth \$11.3 billion and ranks 3rd after the meat and grains sectors (in the primary production area).

- At the time of publication, the total horticultural production volume is 6.4 million tonnes; of which nearly 3.6 million tonnes are vegetables (56%), produced on about 115,000 ha of land
- Close to 210,000 tonnes of vegetables are exported and about 31,000 tonnes are imported
- The production (farm gate) value of vegetables alone is \$3.8 billion (33.6% of the total horticulture industry)
- 99% of households purchase vegetables; the per capita consumption is 87 kg (based on volume supplied; in comparison, meat consumption is 90 kg/capita)
- The industry is made up of a diverse range of producers, supported by agribusinesses, advisors, suppliers, marketers, transport specialists and retailers
- There are about 3700 vegetable producers in Australia
- Typical farms range in area from 50 ha to more than 1,000 ha

Most large vegetable farms are in regional areas. They employ large numbers of staff, from specialists and managers in production and post-harvest technology, to logistics and marketing, Other roles include key production staff in the field and packing houses to large numbers of seasonal workers.

- Advances in technology such as precision farming, remote sensing, nanotechnology, genetic markers, micro sensing and robotics, are changing the way vegetables are produced.





How to Plan your Careers Pathway

Career Planning

Career planning is an ongoing process that can help you manage your learning and development.

You can use the following four step planning process at any stage in your career:

- Step 1: Knowing Yourself**
- Step 2: Finding Out**
- Step 3: Making Decisions**
- Step 4: Taking Action**

Step 1: Knowing Yourself

Begin by thinking about where you are now, where you want to be and how you're going to get there.

Once you have thought about where you are now and where you want to be, you can work on knowing what your skills, interests and values are.

Start by asking the following questions:

- Where am I at now?
- Where do I want to be?
- What do I want out of a job or career?

- What do I like to do?
- What are my strengths?
- What is important to me?

At the end of Step 1 you will have developed a clearer idea of what you want from your job. You can use this information about yourself as your personal 'wish list'. You can then compare all the information you gather in step 2 against this. Your personal preferences are a great way for you to choose your best option in Step 3: Making Decisions.

Step 2: Finding Out

This step involves exploring the roles and topics that interest you.

Research roles that interest you and ask yourself how do my skills and interests match up with these roles? And then ask 'where are the gaps?'

- What options do I have to gain these skills or qualify for these occupations?
- What skills do I need?
- Where is the work?

At the end of this step you will have a list of preferred occupations and/or learning options.



Step 3: Making Decisions

This step involves comparing your options, narrowing down your choices and thinking about what suits you best.

Questions to ask yourself:

- What are my best work/training options?
- How do they match with my skills, interests and values?
- How do they fit with the current labour market?
- How do they fit with my current situation and responsibilities?
- What are the advantages and disadvantages of each option?
- What will help and what will hinder me?
- What can I do about it?

At the end of this step you will have narrowed down your options to have a better idea of what you need to do next to help you achieve your goals.

Step 4: Taking Action

This step is where you plan the steps needed to put your plan into action.

Use all you have learnt about your skills, interests and values together with the information you have gathered about the world of work to create your plan.

Begin by asking yourself:

- What actions/steps will help me achieve my work, training and career goals?
- Where can I get help?
- Who will support me?

At the end of the final step you will have a plan to help you explore your options further (e.g. work experience, work shadowing or more research); or a plan which sets out the steps to help you achieve your next learning or work goal.

Decide which step is relevant for you right now and start from there.





Careers in the Vegetable Industry

Production

Farm Worker
Field Supervisor
Harvest/Packing Crew
Harvest/Packing Manager
Nursery Worker
Nursery Manager
Manager

Science

Agronomist
Extension Officer
Regional Landcare Facilitator
Researcher
Entomologist
Biosecurity Officer

Art, Design & Comms

Marketing Officer
Communications Officer
Graphic Designer
Professional Photographer
Brand Specialist

Marketing & Sales

Market Agent
Sales & Marketing
Rural Supplies Sales
Supermarket Buyer
Export Manager
Logistics Manager

Technology

Drone Pilot
Irrigation Consultant
Robotics Technician
Data Management Technician
Information Technician
App Creator
Electrician

Accounting

Rural Accountant
Payroll Officer
Agribusiness/Bank Manager
Office Administration
Book Keeper

Business Management

Supply Chain
Human Resources
Agribusiness
Farm Retail
Business Administration
Farm/Owner/Manager

Compliance/Training

QA Manager
Dispatch Supervisor
OH&S Manager
EH&S manager
Trainer

Mechanics

Engineer
Welder
Cool Storage Technician
Machinery Service Technician

Machinery Operation

Truck Driver
Tractor Operator
Forklift Operator
Pack-house Supervisor
Irrigation Operator
Harvester Operator
Contractor

There is a role in the vegetable sector for you

Different Phases of a Career in the Vegetable Industry



Phase 1

Has a skill level equal to the completion of year 10, Certificate I or Certificate II qualifications. Apprenticeships may be offered at this level.

Phase 2

Skill level equal to a Certificate III or IV or at least three years relevant experience. Apprenticeships may also be offered at this level.

Phase 3

A level of skill is required equal to a diploma or Advanced Diploma. Study is often undertaken at TAFEs or RTOs but some Universities also offer study at this level.

Phase 4

Usually requires completion of a Bachelor degree or higher qualification and study is most often undertaken at University.



Bee Hemim



Bee grew up on his family's cucumber and capsicum farm where he would help his Dad every weekend. During the week he would have a social lifestyle of sports like basketball

Bee completed year 11 and then headed overseas to Cambodia to travel.

On his return Bee joined the team at Thorndon Park Produce in South Australia where he has been working for over a year.

Some of the tasks Bee has been involved in include washing, picking, packing, and grading vegetables.

Working at Thorndon Park has also enabled Bee to develop other basic farm skills such as learning how to operate a forklift, driving a tractor, irrigating, and planting.



“I like doing something other than doing nothing, and being around the veggio industry, there is always something to learn”

Farm Hand

The Role	Prerequisites	Skills Needed	Horticulture Award	Training options	Resources needed	Next career step
Picking produce	Being flexible	Being a team player	Around \$37,000 - \$44,000 (farm worker award)	Certificate II in Production Horticulture	Car Licence	Field Supervisor
Washing produce	Willing to learn	Willing to listen and adapt		Transport	Nursery Supervisor	
Grading produce	Happy to work as part of a farm roster, not always standard hours	Being flexible in job role		Certificate II in Agriculture	Packing Supervisor	
Packing for market		Ability to learn under pressure		Certificate III in Production Horticulture	Optional: Forklift Licence	Planter Operator
Forklift driving		Like working outdoors		Ability to work under pressure	Certificate III in Agriculture	Harvester Operator
	Enjoy working in a team					



Matt Morris



Matt developed an interest in agriculture growing up on his parents small berry farm helping to run the onsite cafe as well as working as a general farm hand during school and college holidays.

“I enjoyed the seasonal and varied work which meant we were always learning something new” Matt adds.

After finishing college Matt gained an Agricultural Science degree from Hobart in Tasmania. Matt found the degree covered a broad range of topics and although he found these all interesting he did not develop a preference for any one avenue. He believes that this was the driver to go into

agronomy.

Matt finds the role of an agronomist appealing because of the range of work that you can get involved in. Although new to the agronomy role at Serve-Ag Matt explains that he has already experienced the diversity in the role, learning that the agronomist must have a strong understanding of the weather, insect species, plant diseases and weeds. Along with this you need to have a good understanding of soil health, plant nutrition and general farm operations and tie this all into how they influence crop production.

Although Matt has found the breadth of knowledge of experienced agronomists sometimes overwhelming he also finds that this provides a good challenge.

The outdoor nature of the role is also a big plus for Matt who felt that scientific research generally meant spending large amounts of time behind a desk. Whereas his role means he spend the majority of his time outdoors inspecting the crops in the field.

“It’s pretty unique to have a science-based role that lets you use both your head and hands”

Agronomist

The Role	Prerequisites	Skills Needed	Horticulture Award	Training options	Resources needed	Next career step
<p>Crop Monitoring</p> <p>Pest Identification</p> <p>Disease Identification</p> <p>Nutrient Imbalances</p> <p>Recommendations to improve crop health</p> <p>Undertake Trials and training for new products</p>	<p>Agricultural Science Degree</p> <p>Field experience is useful</p> <p>Enjoy working outdoors</p> <p>Able to work autonomously</p> <p>Can manage your own time</p>	<p>Critical Thinking</p> <p>Good communication skills</p> <p>Good organisational skills</p>	<p>\$49,000 - \$83,000</p> <p>Depends on size of enterprise and responsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Agriculture, Agricultural Science</p> <p>Degree in Agriculture, Agricultural Science</p>	<p>A driver's licence and own transport a must</p>	<p>Senior Agronomist</p> <p>Researcher</p> <p>Biosecurity Officer</p>



Laura Cunningham



Growing up in south west Victoria with grandparents who owned a livestock transport business, horses and cattle played a big part in Laura's younger years. Through friends and her grandfather Laura developed a passion for Angus cattle.

After finishing high school Laura furthered her agricultural career working in the livestock industry not only working at cattle studs but also participating in the Angus youth development program.

In 2010 Laura moved to the Northern Territory, taking on a rural services role comprising mainly horticulture and agronomy sales as well as

irrigation. Although this was a steep learning curve, with the support

of many local business owners, Laura gained experience across the sector and the region. Through this experience and network Laura gained her next role as an industry development officer. "This role has provided me the chance to give something back to the community that has helped develop my technical skills" Laura adds.

Laura's role includes assisting growers with production issues that they may encounter, including intergrated pest management. Laura is also involved in the VegNET program, which provides scientific research based information, and through this has also been able to support growers to gain knowledge and confidence required to effectively implement best management practice change to their businesses.

Laura has found another benefit of her role has been the facilitation of training programs to the Vietnamese and Cambodian communities, helping them to achieve best practice and certification for food safety requirements.

"I have been welcomed with open arms and mentored by many very experienced Government and industry leaders who have freely given me their time, taken me under their wing and taught me the ways of the North."

Extension Officer

Extension Officer

The Role	Prerequisites	Skills Needed	Horticulture Award	Training options	Resources needed	Next career step
<p>Crop Monitoring</p> <p>Pest Identification</p> <p>Disease Identification</p> <p>Nutrient Imbalances</p> <p>Recommendations to improve crop health</p> <p>Undertake Trials and training for new products</p> <p>Facilitation of training</p>	<p>Agricultural Science Degree</p> <p>Field experience is useful</p> <p>Enjoy working outdoors</p> <p>Able to work autonomously</p> <p>Can manage your own time</p> <p>Enjoy meeting people</p>	<p>Critical Thinking</p> <p>Good communication skills</p> <p>Good organisational skills</p>	<p>\$49,000 - \$83,000</p> <p>Depends on size of enterprise and responsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Agriculture, Agricultural Science</p> <p>Degree in Agriculture, Agricultural Science</p>	<p>A driver's licence and own transport a must</p>	<p>Senior Agronomist</p> <p>Researcher</p> <p>Biosecurity Officer</p>



Michelle De'Lisle



Michelle De'Lisle always wanted to be a journalist. Sport was her passion, particularly AFL and cricket, and journalism seemed a good fit combining her two favourite hobbies.

“I admired Melbourne-based sports journalists Caroline Wilson and Mike Sheahan growing up, and read the newspaper from an early age,” Michelle says.

At 16, Michelle was lucky enough to get work experience at The Age. She finished year 12 in 2008 and was determined to leave her hometown of Stawell in Victoria. Things didn't quite go to plan. Following a couple of brief stints at university, in 2011 she returned to Stawell in to undertake a journalism cadetship at The Stawell Times-News.

In 2016, Michelle was working at The Ararat Advertiser but decided she needed a sea change. Although her passion for sport was still strong, the newspaper industry wasn't really for her. Michelle applied for a role at AUSVEG with no idea about potatoes and

vegetables, “except that they were delicious and good for you” and just two weeks after taking on the role found herself at the National Horticulture Convention (now known as Hort Connections).

“That was a baptism of fire. I learnt a lot over that week and in hindsight, it was a great start to my role,” Michelle says. She admits her role is not easy, and often calls on other members of the science team for help as well as the great support from her editor.

Being in the horticulture industry has made Michelle more aware of where her fruit and veggies come from, and she values our growers and their hard work. “I think our growers do an amazing job, I know I couldn't do it! All credit to them.”

“My role has enabled me to see some cool things and participate in activities that I never knew existed”



Writer Journalist

Writer/Journalist

The Role	Prerequisites	Skills Needed	Horticulture Award	Training options	Resources needed	Next career step
<p>Write and coordinate the industry magazine Vegetables Australia and its accompanying booklet Vegnotes</p> <p>Liaise with growers and key industry stakeholders</p> <p>Coordinate photographers and freelance journalists</p> <p>Proof read publications</p> <p>Assist in office duties</p>	<p>Need to be able to work at a desk</p> <p>Reliable</p> <p>Able to work autonomously and as part of a team</p> <p>Flexibility when liaising with internal and external stakeholders</p>	<p>Proficient writing skills</p> <p>Good communication skills</p> <p>Able to engage with a diverse range of people</p> <p>Good time management skills</p> <p>Ability to prioritise and meet deadlines</p> <p>Good negotiation skills</p>	<p>\$45,000 - \$110,000</p> <p>Depends on size of enterprise and responsibilities</p> <p>(Payscale Australia)</p>	<p>Internships</p> <p>Diploma in Journalism or Communications</p> <p>Degree in Journalism or Communications</p>	<p>A drivers licence and own transport is preferable dependent on location</p> <p>If freelance:</p> <ul style="list-style-type: none"> • computer • phone • recorder 	<p>Senior journalist role</p> <p>move to a larger enterprise</p> <p>move to a different industry</p>

Anthony De Ieso



Anthony De Ieso is a fourth-generation vegetable grower from South Australia. His great-grandfather established a market garden, which his son managed while also running a building business.

In 1994 Anthony's father, Danny, took over the garden full-time and moved it from the family home of Newton to Waterloo Corner. In 2008 he established a second property at Gawler River.

Growing up, Anthony would often help during school holidays and upon finishing year 12 decided that he did not want to get into the industry straight away and try to make something for himself on his own. From 2007 – 2013 he worked within the child care sector while also in the early years working part time at the garden. At the end of 2013 Anthony was due to get married. Stress at work lead Anthony to leave his job and, needing full-time employment, he stepped into the garden thinking this would be a temporary thing. Almost 6 years later and he is still going strong.

The initial years were challenging for Anthony as even though he grew up a "farmer" he quickly realised that he needed to learn more. Thrown in the deep end, he did everything he could and attended every workshop to build his skills. In 2018 he was in the Growers Success story for his use of VegPRO and his passion about education in the industry.

Anthony's passion and commitment to the industry has paid off being nominated for both national awards for Young Grower of the Year and Grower of the Year



"These past few years have been a great development for me, I pride myself on attending as many workshops as possible and realised there is a big difference between being a manager and being a grower. A manager ensures day to day tasks are done efficiently and methodically.... A grower looks at growing the business in all areas, that's what I have become."

"I love that in my role I can proudly say I am trying to move the business in a new and exciting direction"

Farm Manager

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Growing Crops:</p> <ul style="list-style-type: none"> • Soil preparation • Planting • Fertilising • Spraying • IPM - integrated pest management • Harvesting • Irrigating <p>Post Harvest:</p> <ul style="list-style-type: none"> • Manage orders • Packing supervision • Storage & coolroom management <p>Sales:</p> <ul style="list-style-type: none"> • Customer liaison • Stock management • Product marketing <p>Manage QA</p> <p>Train Staff</p> <p>Manage WH&S</p>	<p>Knowledge in Food Safety</p> <p>Good people management skills</p> <p>Willingness to continually learn</p>	<p>Initiative under pressure</p> <p>Being adaptable and willing to change</p> <p>Not afraid to make decisions quickly</p>	<p>\$34,000 - \$174, 000</p> <ul style="list-style-type: none"> • Depends on size of enterprise and responsibilities <p>(indeed.com)</p>	<p>Diploma in Agriculture or Agribusiness Management</p> <p>Degree in Agriculture or Agribusiness Management</p> <p>Masterclass in Horticultural Business</p> <p>Nuffield Scholarship</p>	<p>Car licence and transport a must</p> <p>Optional:</p> <p>Forklift Licence</p> <p>Truck Licence</p>	<p>Develop current enterprise that you work for</p> <p>Move to a larger company</p>

Tim Neale



After growing up in a small country town in Central Queensland and working on farms through school, Tim went on to study technology in Gatton. Soon after Tim took up a position with Queensland Primary Industries where he worked in extension agronomy for 7 years. During this time, Tim learnt about crops, pasture, soils, farming in general and the extension of information.

The next step in Tim's career was to start his own agricultural consultancy business. Although it was a daunting step after two weeks his first job came in and from that day Tim has never looked back.

He started his first company with his wife in 2002 and "after 17 years in business I am very pleased to look back at all we have achieved (as business is very much a team sport!)" Tim reflects. He started doing work with farm mapping and farm machinery advice which led to work on new technologies such as GPS systems for tractors. From there Tim obtained a large industry project looking into satellite

mapping of farms as well as other technologies such as yield monitoring and EM38 soil surveys.

They eventually sold the business, but they have started a new chapter in Tim's career starting a new company called Data Farming where he has presented at 50 events both in Australia and overseas.

In 2018 Tim was very humbled to receive the Rural Consultant of the Year. Tim said it was great to be recognised by his peers.



"Ag consulting has enabled me to travel the world, work with incredible people, and given me the freedom do the things I want to do."

Data Management

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Provide Advice:</p> <ul style="list-style-type: none"> • New Technology • Software • Precision Agriculture <p>Software Development</p> <p>Other Agricultural Advice</p> <p>Travel Australia and overseas</p> <p>Attend conferences and events</p>	<p>Ability to work with others</p> <p>Collaboration</p> <p>Have a “can do” attitude</p> <p>Have studied a Diploma or Degree</p>	<p>Have an enquiring mind</p> <p>Willingness to continually develop</p> <p>Problem solving</p>	<p>\$54,000 - \$184, 000</p> <p>Depends on size of enterprise, level, or if self employed</p> <p>(indeed.com)</p>	<p>Diploma in Agriculture or Science</p> <p>Degree in Agriculture or Science</p> <p>Nuffield Scholarship</p>	<p>Car licence and transport a must (preferably 4x4)</p> <p>Phone & computer (if you are running your own company)</p>	<p>Develop current enterprise that you work for</p> <p>Move to a larger company</p> <p>Start your own company</p> <p>Move into a different field of expertise</p>



Jane Wightman



For the first 10 years after leaving school Jane went farming across the UK, NZ and Australia, whilst gaining an Advanced National Diploma of Agriculture. Jane loved agriculture and thought she would farm forever, gaining experience in dairy, sheep, beef and cropping.

After marrying an Australian, Jane emigrated to Australia but due to location was unable to find a farm manager position so decided to continue her studies and completed

a Master of Applied Science. Jane is dyslexic but managed to devise ways to cope with the challenges within tertiary education.

After graduating Jane took a position with the Queensland Department of Agriculture as an extension officer. As Jane and her husband followed their careers it led to a long distance relationship, with Jane continuing to work in extension delivering workshops in strategic business management for farmers and, becoming the central Queensland state coordinator for program delivery in the dairy industry.

When her husband moved to Brisbane, Jane ended up working in an

area she had never considered, direct marketing, “it just goes to show you can surprise yourself”. Jane is surprised at how valuable this experience was: it helped develop interpersonal skills and she learned a lot about herself and how to work with people from all walks of life. Jane gained experience as a mentor and leader in an industry that can often be very challenging.

After her second child, and with her husband taking on the care of the children, Jane gained employment at Hort Innovation as an industry services manager with the tropical fruit industries.

Jane then made the step to Meat & Livestock Australia as the Extension and Innovation project manager but the pull to the horticulture sector was always there and last year Jane came back to Hort Innovation to take up a Relationship and Business Development Manager role, Jane adds “I am passionate about playing a role in building industry capability and capacity. The program has some fantastic opportunities for growers and their staff in leadership and development”



“I have had a very varied and rewarding career – so far”

**Relationship & Business
Development Manager**

Relationship & Business Development Manager

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Work with industry</p> <p>Meet the needs of Industry Strategic Investment Plans</p> <p>Facilitation</p> <p>Evaluation of Projects</p> <p>Deliver R&D to meet industry needs</p> <p>Deliver marketing investment portfolios</p>	<p>Passionate about horticulture and/or agriculture</p> <p>Enjoy working with:</p> <ul style="list-style-type: none"> • Growers • Industry bodies • Researchers • Stakeholders <p>Enjoy travel</p> <p>Hard working and willing to put in extra hours when needed</p> <p>Tertiary qualification in either Horticulture, Agriculture or Agribusiness</p>	<p>Strategic planning and thinking</p> <p>Relationship Management</p> <p>Able to work autonomously</p> <p>Enjoy responsibility</p> <p>Being proactive</p> <p>Enjoy problem solving</p> <p>Being able to support industry groups and committees</p> <p>Work in a team</p> <p>Comfortable working with ambiguity</p>	<p>\$52,000 - \$124, 000</p> <p>Depends on size of enterprise and responsibilities and level</p> <p>(payscale Australia)</p>	<p>Diploma in Agriculture or Agribusiness Managment</p> <p>Degree in Agriculture or Agribusiness Managment</p> <p>Masterclass in Horticultural Business</p> <p>Nuffield Scholarship</p>	<p>Car license and transport a must</p>	<p>Develop current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p>



Dr Elia Pirtle



Elia is a Research Scientist in Entomology at Cesar Pty Ltd in Melbourne.

Elia has been fascinated by nature for as long as she can remember. Growing up in the North American desert surrounded by a menagerie of animals and close proximity to the wilderness was the main reason for her passion for the environment, sustainability and conservation.

Completing a Bachelors degree in Biology in her hometown of Reno, Nevada Elia moved to Australia to pursue a PhD at the University of Melbourne. Through her project looking at how lizards stay cool and hydrated in extreme environmental conditions, Elia visited remote parts of the Australian desert which concreted her passion for working in the field.

Elia’s vision was to work in a very applied role where she could feel like she was making a difference, this led her to Cesar where she is able to apply her background in zoology to tackle issues of insect pests in agriculture. Elia has no background in agriculture so the transition was challenging but Elia also found it very rewarding too.

“It has really opened my eyes to just how little I knew about a system which I relied on so heavily every day of my life!”

Elia has found working within the vegetable industry has enabled her to tackle real world problems and see her research go straight to those that can use it.

Elia’s focus pests include some that still pose a biosecurity risk, such as the vegetable leafminer fly.

“I get to work directly with end users , including biosecurity officers, and growers and advisors who would be most affected by this pest. This helps me stay focused on the practicality of the resources I develop. I am an artist on the side, and I always try to apply my artistic skills to make research as clear and user friendly as possible.”

“I have found the vegetable industry a great place to work, where I am always learning, where opportunities to work outdoors are plentiful, and where the growers and advisors I meet are very supportive.”



Research Scientist in Entomology

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Surveillance for insects in the field</p> <p>Insect collection, identification and rearing</p> <p>Testing control measures in the laboratory</p> <p>Testing ID method in the laboratory</p> <p>Running field experiments</p> <p>Data analysis</p> <p>Desktop research</p> <p>Developing user friendly resources</p> <p>Working with:</p> <ul style="list-style-type: none"> • Government • Industry • Community groups • Growers • Advisors 	<p>Happy to work long hours</p> <p>Enjoy meeting people</p> <p>Enjoy collaboration with a range of people</p> <p>Enjoy working outdoors</p> <p>Enjoy travel</p> <p>Need to be able to work in a team</p> <p>Passion for insects</p> <p>Interest to continually learn</p>	<p>Work autonomously</p> <p>Good decision making skills</p> <p>Strong understanding of experimental design and techniques</p> <p>Strong quantitative skills (coding is a plus)</p> <p>Good understanding of ecological processes</p> <p>Good time management and organisational skills</p>	<p>\$76,000 - \$332, 000</p> <p>Depends on size of enterprise and level and responsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Biology or Zoology (or other related subjects)</p> <p>Bachelors degree (or higher) in Biology or Zoology (or other related subjects)</p>	<p>Car licence and transport a must</p> <p>First Aid Training</p> <p>Laboratory Safety Training</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p>

Jessica Lye



Jessica was not born into farming, but that has not stopped her from pursuing a career in agriculture.

In a previous life, as a research geneticist, Jessica developed an interest in science communication. How can we make sure that research at the lab bench does not stay at the lab bench?

“I enjoyed research, but I felt there was a big gap between the science and the practice. It frustrated me. I decided to start expanding my repertoire and develop my communication skills.”

Not long after leaving research

Jessica was offered a role working in horticulture with the peak vegetable industry body AUSVEG. In her role as biosecurity officer for vegetables Jessica was introduced to a world that had seemed far removed from her previous work. The tasks required of

the role required a mixture of scientific thinking, engagement and communication.

“My appreciation of ‘extension’ and the need for it in agriculture has grown over the years.”

From AUSVEG, Jessica moved to research group cesar, which has a strong sustainable agriculture focus. At cesar she now works in research extension on a number of projects across Integrated Pest Management and biosecurity.

“What I would like to see is extension treated less like a ‘tack on’ to research and instead respected as a necessary aspect of our research and development process. I think we need more people deciding on research extension as a career path.

“I feel like I’m doing something of value and contributing to research being more cost-effective.”



Scientific Extension & Communications

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Develop extension plans</p> <p>Presenting research results</p> <p>Organise educational events:</p> <ul style="list-style-type: none"> • masterclasses • seminars <p>Write articles</p> <p>Translate research to key findings</p> <p>Project management</p> <p>Investigate new ways to communicate research findings</p>	<p>Communication skills</p> <p>A scientific background</p> <p>Experience in the agricultural sector</p> <p>Experience or qualifications in event management</p> <p>Skills in engagement</p>	<p>A growth mindset</p> <p>Identify and use new skills and information</p> <p>Adaptability</p> <p>Flexibility</p> <p>Diplomacy and the ability to build relationships</p> <p>Confidence in crowds</p> <p>Straightforward attitude (tell it how it is)</p> <p>Great organisational skills</p> <p>Great communication skills</p> <p>Being a generalist (master of all trades is useful!)</p>	<p>\$76,000 - \$332, 000</p> <p>Depends on size of enterprise and level and reponsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Science or Agriculture</p> <p>Degree in Science or Agriculture</p>	<p>Car licence and transport a must</p> <p>Recording equipment, camera and laptop</p> <p>Access to scientific databases</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p>



Dr Hazel MacTavish-West



Hazel admits she is a bit of a swot and always wanted to be a vet, loving animals, science and studying. Unfortunately just missing out on a Vet course and knowing that she wanted to study at Sydney University Hazel took up a place to study Agricultural Science with the view to swap to Vet after 1 year. However Hazel stuck with Ag Science and had a lightbulb moment during one lecture that described plants “switching on” production of chemicals to ward off attacks from fungi. “Who knew plants were so interesting, I was hooked.”

Some 30 years later Hazel has managed to carve out a career studying and sharing how industry can make money from “the things that make plants coloured”, all those chemicals behind the reason for eating 2 serves of fruit and 5 serves of vegetables a day.

Hazel’s career has been a full and varied one. After finishing an Honours degree she worked for CSIRO on microalgae, then completed a PhD at UTAS on fragrance production in brown boronia flowers. She moved back to the UK with her young family and switched from academia to working in research facilities funded by industry and government, projects such as hydroponic medicinal herb production for use in skincare and how Alstroemeria flowers are produced.

Hazel then set up her own consultancy business to allow for more

flexible work around her two children but continuing in the field of plants and how we can benefit from them. Along the way Hazel also set up another business developing bath and body personal care products, well ahead of its time.

In 2010 Hazel moved back to Tasmania, having to really start all over again. This did not take long as projects happened and things developed. During this time Hazel realised she really enjoyed the process of product development having assisted in the development of products such as gins, potato salads, crunchy dried apple snacks and a series of Innovation Workshops just to name a few of her achievements.

“By understanding the science behind things, and taking both a scientific and a creative approach, and understanding business realities, we add value to businesses in a unique way. No two days are ever the same; I love it!”



Creative Food Innovator - VegDoctor

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Listening to people</p> <p>Identifying needs and opportunity</p> <p>Always observing food trends around the world</p> <p>Think outside the box to come up with new ideas</p> <p>Help businesses get funding</p> <p>Using scientific knowledge and pool of resources to deliver the best solution to the client</p> <p>Communicate the value of products and process</p>	<p>Ability to communicate</p> <p>Have an open mind</p> <p>A “can do” attitude</p> <p>Be a risk taker</p> <p>Commitment to people and process</p> <p>Integrity and confidentiality</p> <p>Love the unexpected</p> <p>Cope with variety</p> <p>Willingness to travel</p>	<p>Knowledge of plant chemistry or your chosen topic</p> <p>Diploma or degree is preferable</p> <p>Constantly seeking out new knowledge and new skills</p> <p>Being able to collaborate</p> <p>Good communication skills</p> <p>Self driven</p> <p>Able to absorb large amounts of information</p>	<p>Depends on size of enterprise and level and responsibilities</p> <p>(no guide given)</p>	<p>Diploma in Science or Agriculture</p> <p>Degree in Science or Agriculture</p>	<p>Car licence and transport a must</p> <p>Professional indemnity insurance</p> <p>In this casestudy:</p> <p>Membership of relevant associations</p> <p>Subscriptions to relevant journals</p> <p>Office/Lab space</p> <p>Computer, phone</p> <p>Good social media network</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p> <p>Set up a new business</p>

Richard Wilson



Richard grew up on the family's sheep and wheat farm in New South Wales. After completing agricultural college he returned to the family farm. Richard managed the family farm for 6 years before deciding to embark on a banking career.

To pursue this Richard completed a Diploma in Farm Management followed by a Commerce degree. For the last 8 years he has been providing banking services to many vegetable growers in the Werribee South irrigation district -

The role is varied and draws on Richard's agricultural background. The major part of his role is to assess new lending and manage clients' existing accounts. In addition to this he also provides financial solutions to assist with managing risks that can include: interest rate management, cashflow management, and foreign currency. Where Richard is unable to provide solutions within the bank for certain risks he will offer referrals to specialists who can provide possible solutions.

The role includes direct client contact and farm visits as well office

work analysing financials, etc. Richard adds "you have to be comfortable with both aspects to enjoy the role. It is not a 9-5 role and you need to be flexible regarding work hours"

"Discussions with clients can be very enjoyable but sometimes challenging when the farm business is not doing well."



Agribusiness Manager

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Assess new lending</p> <p>Manage client accounts</p> <p>Monitor clients' ability to maintain credit</p> <p>Provide financial solutions for managing risks</p> <p>Provide financial solutions and advice for:</p> <ul style="list-style-type: none"> • interest rates • cashflow • foreign currency • transactional solutions 	<p>General agricultural knowledge</p> <p>Tertiary qualifications in related fields such as economics, commerce, finance</p> <p>Enjoy working both in and out of the office</p>	<p>Time management</p> <p>Organisational skills</p> <p>Good communication skills</p> <p>Need to work independently</p> <p>Be able to work in a team</p> <p>Perseverance</p> <p>Integrity</p>	<p>\$57,000 - \$98,000</p> <p>Depends on size of enterprise and level and responsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Economics, Commerce, Finance or Agriculture</p> <p>Degree in Economics, Commerce, Finance or Agriculture</p>	<p>Car licence and transport a must</p> <p>Energy</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p> <p>Branch/Area Manager</p>

Tundra Howe



Tundra grew up on her parents' dairy farm in Caveside, a small farming community in northern Tasmania until she was 11, when her parents moved to the north west to work in the vegetable industry.

Tundra studied Early Childhood Education at UTAS in the early 90's but decided that teaching 5 year olds might test her patience a little too much! So she decided to take a break and live in England for 18 months. To be able to fund the trip Tundra worked at Vecon a vegetable grower/ packer. On returning to Tasmania Tundra returned to Vecon, now called Field Fresh.

Over the next 8 years Tundra worked in all aspects of the business including dispatch, quality control and personnel finally taking on the role as Quality Manager. This was a new role for Tundra but in the following 5 years she enabled the business to gain BRC certification, a global standard for food safety. This was the first business in Tasmania to do so.

In 2005, Tundra left Field Fresh Tasmania to work for Tasmania Quality Assured (TQA), a not-for-profit consultancy whose aim was to

assist agricultural producers develop, implement and maintain food safety systems. In this role, Tundra travelled across Australia helping producers in areas as diverse as Katherine, Dimbulah, Shepparton, Manjimup and Yarck, and worked with a variety of commodities including apples, onions, salmon, mangoes and eggs. During her time here, Tundra participated in Growing Leaders, the national leadership program for the vegetable industry.

In 2014, Tundra began working for Harvest Moon, a vegetable producer based in Forth, in NW Tasmania. Her role as Compliance Manager is varied, allowing her to work with people from all areas of the business and across commodities. During this time, Tundra completed a Certificate IV in Competitive Systems and Practices, a Master of Business from UTAS and had the opportunity to participate in the Produce Executive Program in 2017



"I love that my job changes every day and I have the chance to meet people from all around the world"

**QA/Compliance
Manager**

QA/Compliance Manager

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Collection and analysis of production data</p> <p>Managment of food safety systems</p> <p>Implimenting a new product management system</p> <p>Developing and documenting processes and procedures</p> <p>Organising Events and Farm or Factory Tours</p> <p>Food Safety consulting jobs for external businesses</p> <p>Many other jobs that change from day to day!</p>	<p>Knowledge of Food Safety and Standards</p> <p>Strong Computing skills</p> <p>Ability to define process and write procedures</p> <p>Happy to work at a desk for extended periods of time</p>	<p>People Management</p> <p>Good problem solving abilities</p> <p>Good Communication Skills</p> <p>Good Organisation Skills</p> <p>Ability to work independantly and part of a team</p> <p>Adaptability</p> <p>Ability to think and act quickly</p>	<p>\$56,000 - \$123, 000</p> <p>Depends on size of enterprise and level and reponsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Science or Agriculture</p> <p>Degree in Science or Agriculture</p>	<p>Car licence and transport a must</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p> <p>Consulting</p> <p>Start your own business</p>

Stephanie Mackillop



Stephanie's interest in agriculture was ignited during her childhood where she spent many a spring and winter at her uncle's farm in Blaney helping with the shearing and lambing.

Stephanie has also been involved with horses all her life

starting at the tender age of six months on a little shetland pony called Nugget. Stephanie is now a competitive showjumper not only in Australia but also representing her country internationally.

Stephanie gained a Bachelor of Science in Agriculture from the University of Sydney where she studied the role of soldier fly larvae in reducing food waste which started her interest in food waste reduction and sustainability.

Stephanie could not believe it when a role came up at escaVox, a

company working to track fresh produce through the complex supply chain with the aim of reducing food waste and improving the quality of fresh fruit and vegetables.

"I have already learnt so much since starting my role at escaVox, not only about agriculture and the fresh produce supply chain, but also in technology and data fields. Overall, escaVox has provided me with so many opportunities and I am truly excited about what we are achieving."

"I am absolutely loving working at escaVox. The team are fantastic and have really supported me and constantly encourage me to reach my full potential."



Supply Chain Management

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Recruiting fruit and vegetable growers</p> <p>Data analysis and reporting key findings</p> <p>Device fleet management</p> <p>Device collection</p> <p>Research</p> <p>Understanding and working with the varied supply chains</p>	<p>Communication skills</p> <p>Great work ethic</p> <p>Willingness to continually learn</p> <p>Ability to adapt and think outside the box</p> <p>Flexibility</p>	<p>Organisational skills</p> <p>Good communication skills</p> <p>Basic technology skills</p> <p>Be able to take initiative</p> <p>Adaptability</p> <p>Decision making skills</p> <p>Problem solving</p> <p>Good computer skills</p>	<p>\$49,000 - \$110, 000</p> <p>Depends on size of enterprise and level and reponsibilities</p> <p>(payscale Australia)</p>	<p>Cert IV Production Horticulture or Agriculture</p> <p>Diploma in Science or Agriculture</p> <p>Degree in Science or Agriculture</p>	<p>Car licence and transport a must</p> <p>Ability to travel</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p>



Mark Dobson



Mark grew up with farming and machinery in his blood. His grandfather was a local potato grower and Mark's father, Philip, began the Dobmac Agricultural Machinery business when Mark was just a baby.

Enjoying the outdoors and tinkering with anything with a piston, Mark often worked alongside his father in the garage on motorbikes, mowers and cars.

Mark finished grade 10 and began an IT traineeship at a local Tasmanian high school. This led to him moving out of home and Tasmania for an IT service job with

TAFE South Australia. One year later he returned home to set up a technology company within the Dobmac family business. As well as servicing his IT customers, Mark installed cameras on field machinery to increase accuracy and operator efficiency.

Mark's ability to 'fix anything' saw him become more involved in other aspects of Dobmac, working his way up through the ranks from manufacturing, machine installs, services and then sales.

In 2012 Mark's father suffered a terrible health setback that put Mark into the General Manager role which he continues today. Mark really

enjoys the variety of experiences that Dobmac provides, and as General Manager there is never a dull moment.

Part of Dobmac's vision is to be an innovative market leader in the design, manufacture, supply and service of specialist agricultural machinery in a global market. This has led to Mark travelling all over the world for trade shows, sales and service trips.

Mark loves working with customers providing the best solutions for their complex needs whether infield or processing. The Dobson family take great pride that many suppliers and clients have become lifelong friends.

Married with two young girls, Mark is still tinkering with machinery on their small property and currently has plans to lead Dobmac into a second-generation, family owned company. Mark is thankful for the strong and committed team around him that makes his job so rewarding and keeps him excited for the future.



"I get immense satisfaction seeing projects come together from concept to completion"

General Manager of an Agricultural Machinery Business

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Manage all staff in the business</p> <p>Mangage quotes and customer liason</p> <p>Coordinate freight, customs and quarantine</p> <p>Carry out installs, service and warranty work</p> <p>Attend conferences and trade shows</p> <p>Manage employment and HR issues</p> <p>Problem solver for everyone!</p> <p>Working to plans</p> <p>Interpreting plans</p> <p>Liase with other electricians, engineers, tech support and other tradies</p>	<p>Ability to wear several hats</p> <p>Like variety and be adaptable</p> <p>Love travel and able to work in remote places</p> <p>Work as team player as well as autonomously</p> <p>Good listening and communication skills</p> <p>Good observation</p> <p>Able to interpret and work to technical drawings</p> <p>Ability to work to deadline and underpressure</p> <p>Use safe working practises</p>	<p>Basic knowledge of cropping and farming practices</p> <p>Basic knowledge of post-harvest processes and market requirements</p> <p>Good IT skills</p> <p>Ability to convert foreignn currancy</p> <p>Knowledge of basic global trends</p> <p>Basic Maths for applying margins and discounts</p> <p>Understanding of financial information</p> <p>Good communication</p> <p>General business management skills</p> <p>General admin skills</p>	<p>\$53,000 - \$155, 000</p> <p>Depends on size of enterprise and level and reponsibilities</p> <p>(payscale Australia)</p>	<p>Training options can include:</p> <p>Aprentaships</p> <p>Certificates in business, agriculture, automation</p> <p>Diploma in Business Managment, Automation, Agriculture</p> <p>Degree in Business Managment, Automation, Agriculture</p> <p>(many topics at many levels can be taken to progress in this role)</p>	<p>Car licence and transport a must</p> <p>Forklift Licence</p> <p>Heavy rigid licence</p> <p>Working at heights (optional)</p> <p>Welding, fitting, turning, lathe & spray painting certificates</p>	<p>Develop within current enterprise that you work for</p> <p>Move to a role for a larger company or one in a different sector</p>

Stephanie Prendergast



Stephanie grew up in Sydney but always had had lots of exposure to plants, animals and gardening with many friends and family owning horse studs, cattle farms, and vineyards in both New South Wales and South Australia. Stephanie also worked in the wool industry testing fibre for a while whilst raising a young family.

Stephanie gained a degree in Anthropology and Sociology followed by a degree in Plant Biotechnology and Environmental Engineering and added to this a post

graduate Diploma in Education.

Stephanie then moved to Tasmania where she owned a small property in the Tamar Valley growing fruit and vegetables but it soon became evident that her children would have to go away to school if they wanted to pursue their interest in agriculture and aquaculture. Stephanie became involved in a push to include subjects involved in food and fibre production at schools as well as a career path.

Indirectly Stephanie became involved in the Burnie High School Farm teaching Maths, Science and vocational skills to disengaged students through the Trainee and Apprenticeship Pathway Program. She

found students just loved going to the farm and showed an interest in working and learning in that environment

This led to a specific Agriculture subject for grades 9 & 10 and a junior class (grade 8) Pilot Program in 2018 which proved exceptionally popular. Along with this there is the Revitalising Schools Farms Initiative and, together with Burnie High School, they were able to secure funds to further promote the initiative.

It is currently small scale with 76 students involved but they already have a waiting list of interested students. The students study horticulture, animal husbandry (poultry – ducks/chicken, alpacas and sheep at the moment) on a small scale, engage in the Cows Create Careers and work with other local agriculture industries such as Costa, Agvita, Table Cape Tulip Farm and Harvest Moon to look at all the career options and cross-curricular experience from maths and science as well as STEM, to humanities, including an emphasis on Indigenous farming and land management practices.



Scientific Extension & Communications

The Role	Prerequisites	Skills Needed	Salary Guide	Training options	Resources needed	Next career step
<p>Engaging students in learning</p> <p>Teaching students</p> <p>Liaising with stakeholders i.e. farmers, business owners</p> <p>Understanding and implementing the Australian curriculum</p> <p>Supervising practical activities</p> <p>Keeping abreast of current local, national and international issues and changes in the agricultural sector</p>	<p>High School teaching qualification</p> <p>Passion and basic knowledge in:</p> <ul style="list-style-type: none"> • Land Management • Agriculture • Plants • Animals • Science <p>Good communication skills</p> <p>Good understanding of how systems work</p> <p>Skills in engagement</p>	<p>Aligning what you do to the Australian curriculum</p> <p>Ability to make lesson content fun and engaging</p> <p>Flexibility to be able to teach students at varying levels.</p> <p>Continual development of oneself as well as subjects that you are involved in</p>	<p>\$48,000 - \$96,000</p> <p>Depends on location, and responsibilities</p> <p>(payscale Australia)</p>	<p>Diploma in Education</p> <p>Degree in Education</p>	<p>Car licence and transport a must</p> <p>Curriculum support</p> <p>Access to scientific databases</p> <p>Access to a school farm</p>	<p>Develop within current school that you work for</p> <p>Move to a different school or education sector</p>



Step 1 - What am I doing now

What are my interests?

What are my skills?

**What is my current role/
career?**

**What pre-requisites and skills
are required?**

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What are my abilities?

**What workplace values do I
look for?**

What does my role involve?

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Step 2 - What would I like to do

What would I like to do?

What skills are required?

Where do my skills & interests match?

What are the skills gaps?

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What do I need to do to gain the skills/qualifications required?

Where is the work?

What is my preferred occupation and/or learning option?

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Step 3 - What suits me best

What are my best work/training options?

How do they match with my skills, interests and values?

How does this fit with the current labour market?

How do they fit with my current situation/skills/responsibilities?

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What are the advantages of each option?

What are the disadvantages of each option?

What can I do about it?

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Step 4 - Taking Action

	THIS YEAR (Short Term Goals)			NEXT YEAR
	Personal Development	Learning/ Work exploration	Career Goals	Long Term Goal
I would like to:				
What Steps will help me get there?				
What might get in my way?				
List who or what can help you?				



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