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Industry Overview

Australia's horticulture industry is going from strength to strength, with a 2020/21 production value exceeding \$15.2 billion.

The industry is broad and contains a range of products such as fruit, nuts, vegetables, nursery, turf, and cut flowers.

Horticulture is a keystone in Australia's economy. People will always need to eat fresh produce so there will always be the need for a prosperous industry. With an increasing population to feed, the horticulture industry is continuously innovating and expanding, making it an exciting and satisfying career with strong upward progression.

There is a common misperception that careers in horticulture only involve harvesting crops. But there is a whole range of careers across the horticulture supply chain that require talented, innovative, and progressive minds to continue to push the industry forward. Careers such as entomologists, irrigation designers, mechanical engineers, and agricultural technicians.

All the careers in this booklet are in high demand and can offer onsite training, the only thing left to do is begin!

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This booklet is accurate as of June 2022.

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Careers in the Horticulture Supply Chain

ACROSS FARMS

These skilled persons are usually sourced from external agri-businesses.

SUPPLIERS





Agronomist

Agriculture

Technician



Officer











Mechanical

Engineer





Fitter and Welder



ON FARMS

These people work on farm, in the fields, green houses, orchards or nurseries.



Grower



Hort Farm Manager



Farm

Harvest **Assistant** Hand



Machinery Manager



Machinery







Marketing Manager

Finance Manager

SUPPORTING FARMS

These people provide administrative and

operational assistance to farm businesses.





Manager









Irrigationist &

Irrigation

Horticulture Irrigationist Assistant designer/ Manager Section Manager



Production Hort Supervisor

Senior Nursery



Supervisor

PROCESSORS







Manager

Cold Storage Facility Plant



Supervisor



Truck Driver



Forklift

driver



Mobile Plant

Operator

POST HARVEST

These people work in the warehouses and packing sheds, helping to process and transport the produce once is has been harvested.



Section

Supervisor



Warehouse

Packer

Hort R&D

Officer





Distribution Quality Assurance Manager Manager





WHOLESALE MARKETS



RETAILER DISTRIBUTION CENTRE





INTERNATIONAL RETAILERS/CONSUMERS/ FOOD SERVICES





FOOD SERVICE



CONSUMERS

RETAILERS























- adaptation to soils and nutritional value
- Monitor the crop from sowing to harvest and make sure there are no pests or diseases.
- Communicate project and research results to other professionals and the public through seminars and workshops.

Study pathways:

- Bachelor of Agriculture Science
- ➤ Diploma of Applied Agronomy
- ➤ Diploma of Agriculture
- ➤ Certificate III in Agriculture
- > Certificate III in Horticulture

Check out the Core Attributes on page 50!

AGRONOMIST

plants and soils and applies the knowledge to strengthen the crop production techniques and soil management procedures.

the horticulture industry, they are critical in helping to improving soil and crop production. Agronomists work primarily with growers, scientists, and farm managers to develop better crop production techniques, soil management procedures, and improve the overall

Their time is generally split in the laboratory running soil and primarily on their own but requires excellent communication skills to help growers implement and manage changes to their growing procedures.

Want to

know more?

AGRICULTURE TECHNICIAN



An agriculture technician is responsible for keeping various farm machinery in excellent working condition.

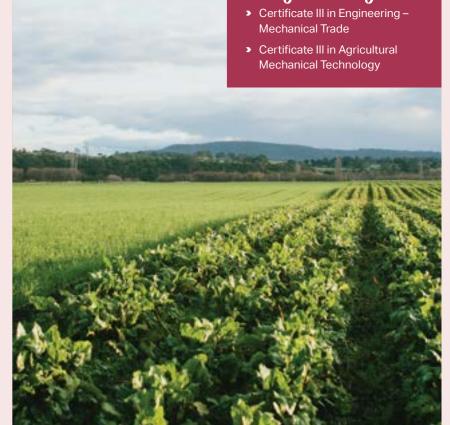
Agriculture technicians undertake regular maintenance, repairs, and general services on a wide range of agricultural vehicles and equipment, including tractors, trucks, harvester, packing and washing machines.

Agricultural machinery is critical for the horticulture industry. Horticulture has become increasingly automated, saving time and money it assists in picking, processing, packing, seeding, spreading fertilisers and chemicals, and transporting produce to market.

Core tasks:

- > Diagnose faults in diesel engines, transmissions, and mechanical parts.
- > Dismantle and repair engines, transmissions, and mechanical parts.
- > Perform maintenance services on vehicles and agricultural equipment.
- > Test and diagnose vehicles and equipment for operational efficiency.
- > Undertake repairs on-farm.
- Order spare parts for vehicles and equipment.
- > Keep detailed records of repairs and maintenance.

Study Pathways:





Emily Nellis, Agronico

An agronomist is a scientist who studies

Agronomists are in high demand in health of the farm.

between visiting farms and working crop samples. An agronomist works











ENTOMOLOGIST

Entomology is the study of insects which are critical for horticulture industry.

Core Tasks:

- Design and conduct experiments and develop scientific papers of findings.
- Study the anatomy of insects by observation, dissection, and microscopic examination.
- ➤ Investigate the chemical structure and function of living cells and their isolated components, organs and tissues in humans, animals, plants, and microorganisms.
- Examine micro-organisms, such as bacteria, fungi, yeast, and their enzymes, and use the knowledge gained to develop new products, materials, and processes.
- Study the growth and characteristics of microorganisms, such as bacteria, algae and fungi, and the effects they have on plants, animals.

Study Pathways:

- Advanced Diploma of Conservation and Land Management
- Certificate III in Rural and Environmental Pest Management
- Certificate III in Urban Pest Management
- Certificate VI in Pest Management

Entomologists help to identify insects and share important life cycle characteristics and information to help manage outbreaks and attract beneficial insects.

Some insects are an important part of the farm ecosystem because they can help to control harmful insects. This practice is referred to as Integrated Pest Management (IMP), which focuses on using natural insect predators to control pest insects instead of using pesticides. An entomologist's time is split between being out in the field or glass house setting up insect traps, and in the lab conducting research.

xylostella



An integrated pest management (IPM) officer is responsible for controlling plant diseases and pests using a non-conventional approach.

IPM involves strategic releasing of beneficial insects to naturally control pests along with organic spray applications. It relies heavily on monitoring plants and planning ahead to control pests in a timely manner.

The benefit of IMP is that it doesn't use harsh chemicals to control plant pests and disease, instead it looks closely at their lifecycle and uses natural predators to prevent and eradicate.

Want to know more? SCAN ME!



Core tasks:

- Monitoring and identifying plants pests and disease.
- Checking spray systems functioning.
- Investigating the chemical structure and function of living cells in plants and microorganisms.
- Investigating the effects of environmental factors on plant grown such as rainfall, temperature, sunlight, soil, topography, and disease.
- Studying the forms and structures of plant tissues by systematic observation, dissection, and microscopic examination.

Study Pathways:

- Certificate III in Rural and Environmental Pest Management
- Certificate IV in Pest Management



Onion thrip







Olivia De La Mare

- > Age: 21
- > **Business:** Green Camel Organic Produce
- > Location: Cobbitty, NSW
- Produce: Mini snacking cucumbers, leafy greens, premium barramundi







With Integrated Pest Management (IPM) Officer, Olivia De La Mare

What is your role at Green Camel Organic Produce and what does it involve?

My role in Integrated Pest
Management (IPM) involves a lot
of different ways of controlling plant
pests and diseases within our high-tech
glasshouses, rather than the conventional
methods using chemical sprays.

My job involves a lot of monitoring for pests, watching numbers, as well as doing organic sprays and releasing beneficial bugs to control the pests that we do have in our crops.

The beneficial bugs come to us packaged either on cards, in vials or in bottles from

our suppliers. From there, we release the bugs into the crop where they eat parasiticides or lay eggs to destroy or control the pest that we have in the crop.

We also have a variety of sticky traps installed in and around the crop that reveal if we have pests, such as white fly or thrips. I also do trap counts, and control all of the sprays to make sure the spray patterns are applied correctly.

Tell us about your journey into horticulture?

I started in agriculture at a very young age because my whole family was involved in it. As I got older, I started studying agriculture in high school.

By age 16 or 17 (when I got into year 11 and 12), I started studying a Certificate II in Agriculture, in a class called primary industries. When I left high school, I was looking for jobs in agriculture and an opportunity to harvest in a high-tech glasshouse came up at Green Camel.

So, I came in and had look around the Cobbitty site and they hired me on the spot. I worked in harvest for a few months before progressing into the IPM space.

Every single one of us are given the opportunity to progress into different roles. In my case, I moved from harvesting into IPM. Next, I'm going into nutrition and irrigation.

When I first started working here, I had no experience in horticulture. I was very much animal-based, but I came into horticulture with an open mind. As I began working and started asking questions, new opportunities started opening up.

different in the crop.

What advice do you have for someone considering a career in ticulture/IPM?

Getting into horticulture does not really require that much prior training. A lot of training is done onsite and in its own unique way for each individual site, because everything changes so dramatically.

A few things that you can get that might help you along are chemical certificates so that you can handle any sort of chemicals, and forklift licences, which are commonly used on-site.

What are some common misconceptions about careers in

A big misconception about working in horticulture is that it is very labour-intensive where people think you are just picking or weeding, and that you do not really see anything from the crop. However, it is a lot more involved than that

Yes, we have crop workers in here who are twisting, de-suckering, and taking care of the plants – but in my role, I get to see every stage of the plant. Rather than just coming in, picking a few things, and leaving again, you really get invested into the crop.

Another misconception in horticulture is that the days are always long and always hard work. There are a lot of opportunities out there in the horticulture industry where you can have a great work-life balance.

I work from 6.30am until 2.30pm each day, so my afternoons are completely free and for me it is like that all season.

Horticulture is something that you can see directly affects the world. It is designed to feed people. You are feeding the masses, and you never really realise it until you see the amount of fruit that comes off the crop.

What I do in IPM is at the very start of the train. It is making sure that those plants are healthy and ready to produce fruit.

I love horticulture because my career can grow with the plants and my job is not going anywhere. There is always a need for people in horticulture. If it is something that you want to do, you just go for it. Get in the crops, work hard, and ask questions – and so many opportunities will open up for you.

Core Taaka:

- Inspect animals, plants, and agricultural produce to identify pests and disease, and provide advice to producers.
- Audit and monitor quality and hygiene procedures at farms and processing facilities to ensure compliance with required standards.
- > Test samples of produce for quality, size, and purity.
- Advise primary producers on economic aspects of disease eradication and inform producers and the public of the health implications of diseases and impurities.
- Advise on the identification of pests and diseases and on regulations pertaining to grading, packing, and loading of products.
- May initiate or assist in legal action to enforce regulations.
- Inspect import and export documentation.
- Maintain a deep understanding of biosecurity protocols.
- Conduct workshops to raise awareness and educate growers and industry of specific plant pests and disease.

Study Pathways:

- Certificate III in Public Safety (Biosecurity Emergency Response Operations)
- Certificate IV in Public Safety (Biosecurity Emergency Response Leadership)
- Diploma of Public Safety (Biosecurity Emergency Response Management)

BIOSECURITY OFFICER

A biosecurity officer provides information on plant pests and diseases, and helps farmers to identify, prevent, and eradicate threats.

Biosecurity officers frequently travel regionally and interstate to inspect produce onfarm and engage with growers.

The horticulture industry takes biosecurity very seriously, outbreaks of plant pests and disease can cause millions of dollars in damage and loss. A biosecurity officer helps to protect Australia and its' \$4.8 billion horticulture industry from

exotic or local plant pests and disease.

While the Australian Border Force helps prevent many foreign pests and diseases arriving by air and shipping ports, it is vital that biosecurity officers are also out on-farm to provide another layer of defence.



MECHANIC

Horticulture relies heavily on machinery to grow, prepare, process, package, and transport produce.

It is vital all machinery is running smoothly and is well maintained. A horticultural mechanic is responsible for regularly tuning machinery and actively responding to breakdowns.

They have a broad skill set to be able to work with highly customised horticulture machinery and vehicles. In addition, horticulture mechanics must be open and quickly able to learn about new machinery. It is important they work to a deadline to get machinery up and running as quickly as possible.

Core taaka:

- > Detect and diagnose mechanical and electrical faults in engines and parts.
- > Dismantle and remove engine assemblies, transmissions, steering mechanisms, and other components, and check parts.
- ➤ Repair and replace worn and defective parts and reassemble mechanical components.
- > Perform scheduled maintenance services, such as oil changes, lubrications, and engine tune-ups, to achieve smoother running of vehicles and ensure compliance with pollution regulations.
- > Test and adjust mechanical parts after being repaired for proper performance.
- > Diagnose and test parts with the assistance of computers.
- Inspect vehicles and issue roadworthiness certificates or detail work required to achieve roadworthiness.

- ➤ Certificate III in Engineering Fixed and Mobile Plant Mechanic
- ➤ Certificate III in Engineering Mechanical
- ➤ Certificate III in Agricultural Mechanical Technology
- > Certificate III in Automotive Diesel Engine















- Study organisational charts to determine functions of various machinery and work units to create the most streamline system possible.
- Design and develop mechanical equipment, machinery components, products for manufacture and systems for construction.
- Organise and manage project labour and the delivery of materials and equipment.
- Establish standards and policies for installation, modification, quality control, testing, inspection, and maintenance according to engineering principles and safety regulations.
- Inspect plant to ensure optimum performance is maintained.
- Direct the maintenance of plant buildings and equipment, and coordinate the requirements for new designs, surveys, and maintenance schedules.

MECHANICAL ENGINEER



A mechanical engineer helps plan, design, organise, and oversee the assembly, erection, commissioning, operation and maintenance of mechanical and process plants, and installations.

To effectively design a solution, they need to have an in-depth understanding of various horticultural machinery and processes and be willing to learn about new systems. They must be able to communicate and collaborate with managers and staff to understand the

requirements of machinery on farm.

Mechanical engineers need to be organised to coordinate the ordering and delivery of parts to ensure products arrive before the deadline.

Registration or licensing may be required.

MAINTENANCE ELECTRICIAN

As a maintenance electrician, it is your responsibility to maintain and upkeep all electrical systems in the business.

You will be working on large and small circuit systems that will require attention to detail when fixing and altering systems. You will need to work independently and be proactive to repair machinery to ensure the production lines are back in operation as soon as possible.

Core Taaka:

- Assist with maintenance and continuous improvement of the equipment.
- Ensure equipment is operating at high efficiency during peak season and manage breakdowns.
- Perform preventative maintenance on equipment in the off-season.
- Examine blueprints, wiring diagrams and specifications to determine sequences and methods of operation.
- Measure and layout installation reference points.
- Select, cut, and connect wire and cable to terminals and connectors.
- Use electrical and electronic test instruments to trace and diagnose faults.

- Repair and replace faulty wiring and defective parts.
- Position and instal electrical switchboards.
- Connect electrical systems to power supply.
- > Test continuity of circuit.
- ➤ Install, test, and adjust electric and mechanical parts of lifts.
- Install, test, and commission solar photovoltaic (PV) power generation systems.

- Certificate III in Electrotechnology Electrician
- Certificate IV in Electrotechnology – Systems Electrician
- Certificate III in EngineeringIndustrial Electrician



FITTER & ONE WELDER

A fitter and welder is responsible for fitting, assembling, and welding metal parts to repair and construct production machinery and other equipment.

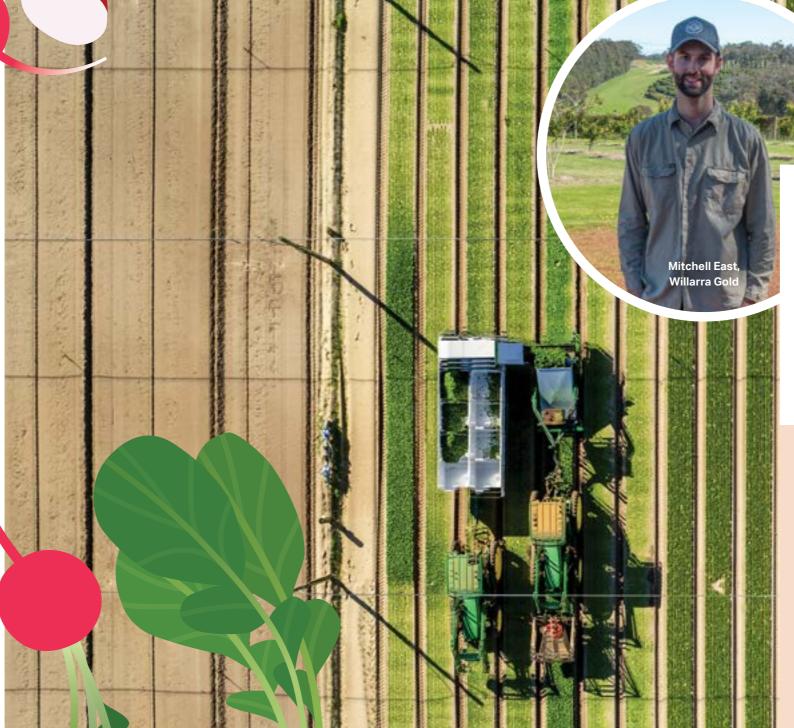
It requires a high-level of detail and precision to record, measure, and fit parts together.

Core taaka:

- > Studying drawings and specifications to determine suitable material, method and sequence of operations, and machine
- > Fitting fabricated metal parts into products and assembling metal parts to produce machines and equipment.
- > Checking fabricated and assembled metal parts for accuracy, clearance and fit using precision measuring instruments.
- Setting guides, stops, cutting, shaping, and other controls on machining tools.
- > Forming metal stock and castings to fine tolerances using machining tools to press, cut, grind, plane, bore and drill metal.
- Cutting, threading, bending, and installing hydraulic and pneumatic pipes and lines.
- Diagnosing faults and performing operational maintenance of machines and overhauling and repairing mechanical parts and fluid power equipment.
- > May erect machines and equipment on-site
- > Keep accurate records of all maintenance work done. Be detail oriented and maintain high safety standards.

Study Pathways:

- > Certificate III in Engineering -Mechanical Trade
- > Certificate IV in Engineering
- > Certificate in Engineering -Fabrication Trade



HORTICULTURE GROWER Wantto

A horticulture grower oversees the entire cropping process from ground preparation, irrigation, fertigation, seeding, through to picking, processing, and packing of vegetable crops and other horticultural commodities.



Core Tasks:

- Planning and coordinating the production and marketing of crops from soil preparation to harvest taking into account environmental and market factors.
- Selecting and planting seeds, seedlings, and bulbs, and grafting new varieties to root stocks.
- Maintaining crop production by cultivating, de-budding and pruning, and maintaining optimal growing conditions.
- Organising and conducting farming operations, such as collecting, storing, grading, and packaging produce, and organising the sale, purchase and despatch of produce.
- Directing and overseeing general farming activities such as fertilising and pest and weed control.

- Maintaining farm buildings, fences, equipment, and water supply systems.
- > Maintaining and evaluating records of farming activities, monitoring market activity, and planning crop preparation and production to meet contract requirements and market demand.
- Managing business capital including budgeting, taxation, debt, and loan management.
- ➤ May select, train, and supervise staff and contractors.
- Develop climate risk management strategies.
- > Manage work health and safety processes

- Diploma of Horticulture
- Advanced Diploma of
- ➤ Certificate III in Horticulture
- ➤ Certificate III in Protected
- Diploma of Applied Agronomy













IRRIGATION DESIGNER/MANAGER

Core Tasks:

- > Design and manage irrigation systems and monitor programs.
- Appropriately select the best irrigation and pumping system based on crop, soil type, topography, water availability, climate, hydraulic parameters, technology, price, and client
- Supervise irrigation system installations and maintenance.
- > Determine soil types and growth characteristics of crops.
- Interpret aerial photographs and prepare maps showing soil and vegetation patterns.
- In conjunction with agribusiness professionals, develop an irrigation and drainage management plan.
- > Establish an irrigation related environmental protection program.
- Provide specialist advice to clients including plans and reports.
- Prepare estimates, quotes and tenders.
- Set up laboratory or field equipment for soil, water, and irrigation testing.
- > Negotiate and monitor contracts.

Want to



As an Irrigation manager you will provide professional and technical support to the horticulture and agriculture industry sectors in developing, designing, and managing irrigation systems.

Bhavesh Donga,

Plunkett Orchards

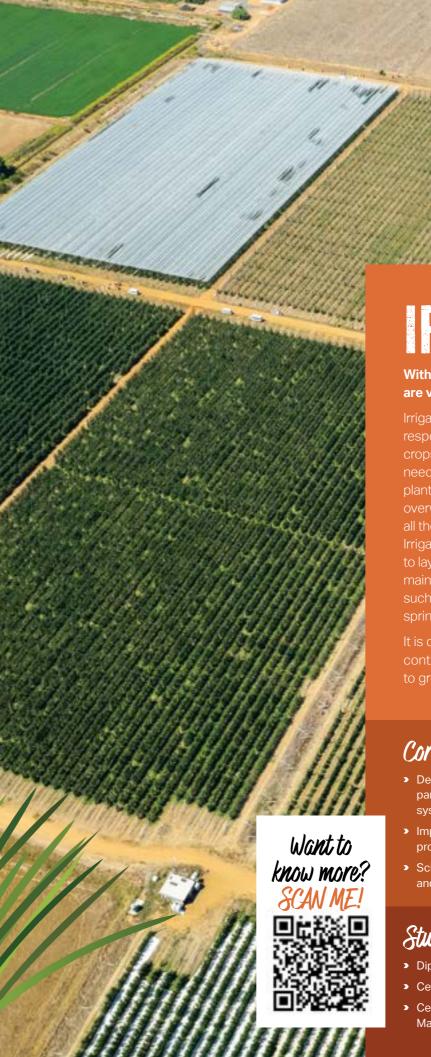
This role can be fullfilled by employing an irrigationist through an external contractor or by directty employing an in-house irrigation manager/ designer.

The role is quite diverse, and duties can involve setting and checking irrigation systems, pest monitoring, spray management, and other day-to-day duties like slashing

and tractor driver jobs.

Large scale properties rely on precision management and innovative irrigation infrastructure to deliver and ensure best service.

An irrigation manager will also inspect each block/ area and check the leaf and fruit quality to ensure plants are not stressed and are growing well.



RRIGATIONISTS

Without water, nothing grows - that's why irrigationists are vital to the success of horticultural production.

crops water and nutritional needs, making sure each plant is not under or overwatered and is getting to layout, monitor, and such as drip, surface, and sprinkler systems.

continue to explore ways to grow the crop more

efficiently and improve the technologies and assistants, and irrigation managers/ designers are horticulture industry.

helps the irrigation manager/ designer and irrigationist to install,

Core Tasks:

- Determine hydraulic parameters for an irrigation
- Implement an irrigation program.
- Schedule irrigations and interpret and apply
- irrigation designs.
- Select and manage pumping systems for irrigation.
- Supervise irrigation system installations and irrigation maintenance.

- > Diploma of Horticulture
- ➤ Certificate III in Horticulture
- > Certificate IV in Irrigation Management
- > Certificate III in Work Health and Safety
- Certificate III in Irrigation Technology













Arman Berkett-Saleh

What is your role and what does

your job entail? My main role in irrigation and nutrition is looking after all the strawberry plants to make sure they produce the best strawberries we can. To produce great strawberries, we want to make sure the plants are not stressed out, underwatered, or overwatered, and are getting fed correctly.

To do this, we take the time to look at the plants and ask questions relating to how the plants are growing and what they are doing.

We look at what the plants have done to date, and at how the plants are going to react in coming weeks. Essentially, we ask ourselves how can we grow them better to produce a better fruit for the consumer?

What improvements have been made to Stothart's irrigation infrastructure?

You can't be the best without continuous improvement. We are always looking to improve and lead the way with new technology, innovation and production within the strawberry growing region in south-east Queensland.

"We've looked at the production value of growing strawberries on tables compared to ground. Since converting three-quarters of our growing area to tabletop production, we have seen more production, better water use efficiency, less disease and better pest management."

This method of growing also means we have better control over the quality and grow better fruit overall. We can grow more in less area, which adds to our intended direction of providing more fruit to consumers.

What are some misconceptions about working in horticulture?

It's not as hard as you think it would be - there are plenty of job opportunities and lots of fruit and vegetables out there that need to be grown.

I think people need to look away from that stigma that working in horticulture is just hard, back-breaking work. We have the technology now, and we are continuously trying to improve to make it easier for everybody to work. We are trying to get better so we can attract the next generation into the industry.

> What was your journey into horticulture?

I started my career in mining after completing a degree in Geology. I transitioned into horticulture because it gave me the opportunity not to just sit behind a desk and come home to my family at the end of each day.

season knowing that I contributed to the performance of this farm is rewarding.

What advice do you have for a young person thinking about starting a career in horticulture?

For any young people who would like to start a career in horticulture, there's probably two pathways one can take.

The first one is getting out and applying for a job and learning as you go, and then eventually going on to do further studies. If there's an area within the industry that a person really wants to do, there are plenty of opportunities and pathways through TAFE and universities to develop your skillset to get these jobs.

Secondly, there's no harm in starting work directly on a farm, especially

if you're young. You can gain some understanding of what work is necessary to run a farm and what needs to be done to produce fruit. It's important to get the experience to know what you're looking for. You could be running warehouses and doing stocktake or becoming an expert in irrigation and growing plants.

Although these are two very different pathways, both provide the same opportunities.

Why do you do what you do?

It's amazing to see how a strawberry can progress from a little plant at the start of the season to producing berries. We take heart in the response from people who have eaten our fruit saying how fantastic it is. It's what we strive for – keeping the consumer happy by providing a great strawberry for them to eat.

Want to know more?



Arman Berkett-Saleh

- > Business: Stothart Family Farms
- > Location: Bellmere, Queensland
- > **Produce:** Strawberries



I get to be outside and get to grow something. Being able to see the results of the hard work that you put in and then to enter the back end of the

HARVEST HAND

A harvest hand is a seasonal role that can last a few weeks to few months, however with produce grown year-round there are always job opportunities.

Harvest hands are required to harvest produce both by hand and using machinery.

Core Tasks:

- Picking produce according to set specifications and discarding overripened produce.
- Grading, and packing produce and loading it onto transporters.
- Maintaining and cleaning farming infrastructure and equipment.
- Operating and maintaining farm machinery.
- Operating data collection and farm technology systems.

N THE NURSERY

A nursery is a controlled environment where horticultural plants are grown from seed to seedling.

The nursery provides a protected environment where seedlings are closely monitored to ensure their water and nutritional needs are met, and they are free from pest and disease. Nurseries can be indoor, outdoor, in hot houses, shade houses, shade houses or open nurseries.

Overseeing the entire nursery operation is the senior nursery person, who is responsible for everything from the seed being germinated through to dispatch. They help to order supplies such as seeds, soil, and fertiliser and organise transport and logistics for delivery of sales stock.

The senior nursery person works closely with the nursery supervisor who leads a team of nursery persons through daily tasks, such as thinning, pruning, spraying, watering, and packaging plants.

The senior nursery person regularly collaborates with irrigationists, horticulturalists and customers to ensure the highest standard and health status of product.

Study Pathways:

- ➤ Diploma of Nursery Management
- Certificate III in Nursery Operations
- Certificate III in Horticulture
- Certificate III in Production Horticulture
- Certificate III in Protected Horticulture
- Diploma of Production Nursery Management
- ➤ Certificate III in Production Nursery

Core Tasks:

- Prepare soil and fertiliser mixes for crops.
- Select seeds, bulbs, and cuttings, and plant them in containers, trays, or beds.
- Develop a soil health and plant nutrition program.
- > Manage hydroponic systems.
- Supervise maintenance of property, machinery, and equipment.
- Water plants using manual and automatic watering systems.
- Apply sprays to control pests, diseases, weeds.
- Monitor plants to ensure their nutritional and water needs are met.
- ➤ Keep records of soil mixtures, water and nutrient data, plantings, treatments, losses, and yields.
- Selecting plants and packaging them for presentation and delivery.
- Advising customers on plant care and appropriate plants for local conditions.
- Planning sales area layouts and visual merchandise presentation.
- Order seed, fertiliser and chemicals and select stocks based on weather and soil conditions and yield.
- Implement appropriate pesticide and weedicide programs.
- Coordinate nursery work teams.
- Manage transport and logistics for delivery of sales stock.
- Maintain good plant health and manage disease, biosecurity risks and the irrigation of crops.
- Sample and interpret soil conditions and compost.
- Supervise maintenance of property, machinery, and equipment.



Want to

HORTICULTURE FARW WANGER

A horticulture farm manager oversees and manages the cultivation, growing and maintenance of vegetables, fruits, berries, nuts, and other crops.

They work all year round helping to prepare soils for seeding before the season, and everything through to the post-harvest clean up.

The farm manager is a hands-on role which relies heavily on communication with other managers to ensure the crops are tracking as intended.

Core Takka:

- > Determine, implement, and monitor production strategies,
- ➤ Plan details of production activities in terms of output quality, quantitiy, cost, time, and labour requirements.
- Oversee the operation of production plant and quality
- Monitoring production output and costs and adjust processes and resources to minimise costs.
- > Inform other managers about production matters.
- > Oversee the acquisition and installation of new plant and equipment.
- > Direct research into production methods and recommend and implement new initiatives.
- ➤ Control the preparation of production records and
- > Coordinate the implementation of occupational health and safety requirements.
- Direct staff activities and monitor their performance.

Study Pathways:

- Diploma of Agribusiness Management
- Diploma of Agriculture
- > Diploma of Horticulture



The South Australian Potato Company is a family-owned enterprise that has three farms spanning across the Mallee region and north of Adelaide in Virginia.

The operation has a team of 120 passionate staff that grow, pack and market approximately 60,000 tonnes of fresh potatoes farm every year for Australian and international consumers.

Nicole Stevens, SA Potato Co

Nicole's journey into horticulture hasn't been straightforward. A few years ago, she was working in hospitality, having studied a Bachelor of Science with Honours in Tourism Management at Sheffield Hallam University in the United Kingdom.

Nicole then decided to come to Australia and travel around, like a lot of young British backpackers in their early 20s. She arrived in Pinnaroo to complete 88 days of farm work in order to earn an extra year on her Australian Working Holiday Visa.

A Rising Potato Industry Star

"I was on a farm near the South Australian Potato Company in Pinnaroo, grading on the back of a potato harvester. I then went on to learn how to drive tractors and various other machinery," Nicole

"When I came to the South Australian Potato Company, I started off as the Planter Operator. From then on, I started taking on further irrigation duties and maintenance and then that's when I became an Assistant Manager. After six months, I naturally progressed into becoming the Farm Manager of the Parilla farm."

"I have fallen in love with the whole industry, and now I don't want to leave. ' wake up every morning and I can't wait to go to work. Every day is different and a challenge, but it's what you make it. If you want to progress and perform, it's a great industry to do it in," Nicole says.

Nicole Stevens

- > Job: Farm Manager
- > Age: 28
- > Business: South Australian Potato Company
- > Location: Parilla, SA
- > Produce: Potatoes



Championing education

Nicole says the South Australian Potato Company has been very supportive of the training opportunities that have been provided to her. Such as a business management degree, an agronomy course, and a professional mentoring program.

"Although I studied at university, I didn't need any specific qualifications or degrees to for this role -training was provided on-the-job as well as extra courses such as chemical certificates, forklift licence and truck licences."

Generation next

"Although being a farm manager is a highpressure role, you have a lot of flexibility and a good work-life balance. We're in a nice community around here and everyone socialises; it's not just work and living on the farm 24/7," she says.

"The advice I'd give to the younger generation would be: if you're looking at getting into the industry, contact local farms or industries or packing sheds and see whether you can pick up some extra work to gain that experience, even if you just want weekend or after-school work. If you want a pursue a career later in life, at least you have a little bit of experience, and it also helps to find out what it is you're interested in within the industry."



SECTION WANAGER

A horticulture section manager oversees the

the field, and the packing sheds. produce in the fields.

prepare labels for the day's harvested produce, before organising the packing shed to ensure quality assurance and safe practice procedures are met. The section manager also liaises with

Check out the

Core Attributes

on page 50!



- take corrective actions where
- seeding and planting are satisfied.
- Assess quality of work and take corrective actions where
- Ensure that seed stock / levels / usage is managed as per company procedures.
- Liaise with growers, farm operation managers, agronomist where
- Ensure that all seeding equipment is maintain as per procedures.
- seeds are of acceptable quality.
- Ensure all records are maintained.
- correctly.
- Work with harvest and packing shed teams.

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disease management program, as well as nutritional programs testing.

supervisors work both indoors and outdoors overseeing the irrigation scheduling for the farm managers.

Core Tasks:

- > Ensure scheduled crops for intended harvest have passed the withholding period.
- > Ensure that all specialised harvest equipment is maintained.
- > Ensure correct harvest to suit conditions of crop, soil moisture and variety to minimise any mechanical damage.
- > Liaise with farm operation manager / shed production manager / maintenance supervisor.
- > Ensure quality of harvest throughout harvest period to minimise damage.
- > Identify and report unusual disease or plant pest signs.
- > Transport and store chemicals.
- > Prepare and apply chemicals to control pest, weeds, and diseases.
- > Implement a post-harvest program.
- > Establish horticultural crops.
- > Carry out emergency disease or plant pest control procedures at infected premises.
- > Operate chemical application machinery and equipment.
- > Coordinate work site activities.
- > Perform shed nursery activities.
- > Regulate crops.

Study Pathways:

- > Certificate III in Production Horticulture
- ➤ Certificate III in Horticulture
- > Diploma of Production Horticulture
- ➤ Diploma of Horticulture
- > Certificate II in Production Nursery











harvest and processing of produce. Their time is split between the office,



- Coordinating trucks for pick up and
- Assess quality of work and
- > Ensure that all specification for
- applicable.

- Monitor germination to ensure
- Ensure all crops are labelled
- Uphold and implement high health and safety standards.

Study Pathways:

- Diploma of Production Horticulture



The role involves a lot of pest and disease monitoring, plant nutrition and watering. They are responsible for implementing the

PRODUCTION

SUPERVISOR

HORTICULTURE

Occupations such as production horticulture supervisor

have become increasingly important for horticulture businesses and are in strong and growing demand.

AXA

and testing, such as soil and leaf

Want to

Production horticulture



MACHINERY NANAGER

A machinery manager oversees the day-to-day running of the produce packaging lines and works with the management team to process goods.

They help uphold work health and safety standards and run training sessions for various teams to ensure quality and safety standards are upheld.

Core Takka:

- > Manage the packing line via an effective and proactive supervisory presence to achieve maximum efficiency.
- ➤ Liaise with the quality control officer on a day-to-day basis to ensure the correct quality standards are met.
- > Set and control operating systems to ensure accurate performance which meet specifications and packing instructions.
- ➤ Have full knowledge of all the protocols that must be met for domestic and export fruit and vegetables, and check the packing instructions, labelling (cartons, crates, and pallets) and traceability systems match the requirements for those markets.
- > Control fruit inputs with the forklift driver.
- ➤ Liaise with the designated chemical supervisor to ensure that effective and timely monitoring and management of all line functions are carried out in a timely manner.
- > Perform pack house staff training as requested by management.
- Assist in the management of all packing lines as required by shed management.
- ➤ Have a full understanding of the traceability system.
- ➤ Ensure the label applicators are functioning to their full potential and general maintenance when required.
- > Follow Occupation Health & Safety policies and procedures and help ensure all packing shed staff comply with occupational health and safety, and quality assurance requirements.
- ➤ Report repairs and maintenance requirements promptly to the maintenance supervisor.
- > Other duties as agreed in consultation with management.

Study Pathways

- ➤ Production Horticulture Machinery Skill Set
- ➤ Course in Safe Use of Machinery for Technology Teaching
- > Workplace Supervisor Skill Set



Horticulture

Horticulture



➤ Certificate VI in Protected





increasingly popular to

grow crops like cucumbers

and tomatoes. A protected









Coordinate and supervise a

- team of staff to undertake daily tasks in allocated section.
- Assist with training and assessments of pack house employees.
- Arrange external contractors.
- Ensure all staff adhere to Total Quality Management, Food Safety, OHS and Personal Hygiene guidelines and practices.
- Liaise with Agronomist / Agricultural Technician / Farm Operation Manager regarding crop treatments.
- Ensure all methods of crop treatments are done as per standard procedures.
- Help with pre-plant fertiliser application, broadcasting of fertiliser and boom spraying of chemicals.
- Use a forklift to load/ unload produce on/ off trucks and in/ out of packing shed/ cool room.
- ➤ Ensure all documentation matches load and delivery/ despatch requirements.
- Assist with completion of daily weight checks and pack house preoperational checks.
- Assist with weekly cleaning program.

Study Pathways:

- Production Horticulture Supervisor Skill Set
- Diploma of Horticulture
- > Certificate III in Horticulture

SECTION SUPERVISOR

A section supervisor in horticulture ensures that activities are carried out as per established procedures, and operators are trained to discharge their respective duties.

A section supervisor can be allocated to various sections of a horticultural facility, including in the field, warehouse, greenhouse, or packing shed.

In the field, they will supervise a team of workers and coordinate daily tasks such as pruning, trimming, picking, tree training, and harvesting.

communication skills to ensure tasks are being completed correctly by the workers - who might speak a different language.

The role requires excellent















- > Inspecting and reporting on the condition of crops.
- > Assisting in the planting of trees, seeds, seedlings, roots, bulbs, tubers, vines, and other plants using hand tools and farm machines.
- > Undertaking soil preparation, cultivation and plant and crop maintenance duties such as thinning, weeding, hoeing row crops, pruning, and thinning trees and vines.
- Assisting with pest and disease management regimes such as spraying and using integrated pest management practices.
- Operating and monitoring irrigation systems.
- > Erecting growing supports such as trellises, and protective structures such as greenhouses, netting, and
- Harvesting fruit, nuts, grains, vegetables, and mushrooms according to set requirements, and discarding rotting and overripened produce.
- Grading, siloing, baling, sorting, bunching, and packing produce and loading it into transporters.
- Maintaining and cleaning farming infrastructure and equipment such as sheds, fences, plant, and water supply and irrigation systems.
- Operating and maintaining general farm machinery and machinery to cultivate, fertilise, spray and harvest horticultural produce.
- Operating data collection and farm technology systems.

Study Pathways:

- Certificate I in Horticulture
- Certificate II in Horticulture
- ➤ Certificate II in Production

FARM ASSISTANT

A farm assistant performs routine tasks on a farm that are associated with the preparation of soil before seeding, to cultivating, irrigating, fertilising, weeding, and harvesting.

Throughout the season they may assist in pest and disease management where needed.

Farm assistants work all yearround and primarily outdoors.

Along with a range of manual activities, a farm assistant also help operate farm machinery to complete tasks such as mulching, netting, and spraying.





A distribution manager oversees the movement and delivery of produce to, from and within the company.

In most horticulture businesses the role requires high-level organisation to coordinate teams of truck and forklift drivers, warehouse staff, and supervisors to ensure produce is stored appropriately, packaged, and delivered to market on time.

In the horticulture industry the with customers to organise orders and arrange delivery timeframes. The turnaround for produce is often daily, so it is critical all documentation is correct, so orders can be sent out.

Core Tasks:

- Ensure all dispatch items have accurate and correct delivery documentation, labels, and information.
- Allocate appropriate storage location for relevant stock - implementing relevant operations efficiencies and processes.
- Lead meetings to set out daily tasks and goals to create a cohesive team and streamline system.
- Manage and organise transport team to coordinate pick-ups and delivery of fresh produce.
- Verify loading documents and obtain certificates of deliveries.
- > Check condition of produce.
- > Estimate the weights of produce to comply with load limitations and ensure safe distribution of weight.
- Ensure produce is stowed and securely covered to prevent loss and damage.
- > Communicate to customers delivery timeframes.
- Partner with suppliers to develop optimal packaging, storage and labelling to support efficient inventory handling and
- > Overseeing forecasting and information flow.

- Diploma of Logistics
- ➤ Certificate IV in Supply Chain Operations
- > Diploma of Leadership and Management
- > Certificate IV in Leadership and Management









- ➤ Liaise with Despatch Manager and Production Shed Supervisor.
- > Carry out all machine pre-checks and maintain all product movement records.
- > Move pallets in and out of cool rooms in line with batch requirements.
- Load and unload pallets on trucks.
- Prepare despatch paperwork.

FORKLIFT DRIVER

In the horticulture industry forklift drivers are responsible for moving produce from trucks in and around the processing facility including into cold storage rooms and loading it back onto trucks before it goes to market.



TRUCK DRIVER

Truck drivers are critical to the horticulture industry, without them, there would be no produce at supermarkets.

They help to move produce from rural and remote farms and processing facilities to urban markets and supermarkets. They are responsible for the

timely delivery of produce whilst maintaining high safety standards and following all appropriate cold chain management procedures.

- chain management staff, markets, and other drivers to ensure timely delivery and
- > Assist with loading and unloading produce using lifting and tipping devices.
- > Maintain temperature control of the truck/ container.
- > Undertake regular quality checks of vehicles to ensure they can be driven
- > Ensure goods are stowed and securely covered to prevent loss and damage.
- > Maintain appropriate records.

WAREHOUSE PACKER

A warehouse packer assists in processing, packaging, and delivery of produce.

They pay close attention to produce quality and lot numbers to ensure orders are filled correctly and on time. Working in a team, a packer will help coordinate the movement of produce and keep accurate records of order statuses.

A warehouse packer is often required to operate a forklift to load and unload trucks and transport produce around the packing and processing facility including into the cold storage rooms.

It is critical produce is moved efficiently and on time to ensure markets receive fresh and quality produce. This role requires strong time management skills and the ability to work quickly and safely.



Study Pathways:

- Certificate I in Supply Chain Operations
- ➤ Certificate II Supply Chain Operations
- ➤ Certificate II in Food Processing

Core Tasks:

- Undertake daily activities, including quality assurance, hand packing, inventory control, space management, logistics, floor productivity, shipping, and customer service.
- ➤ Ensure all arriving produce is accurately recorded, including the allocation of lot numbers, initial quality checks and out of specification produce is reported appropriately.
- ➤ Ensure stock is rotated to assist the Production Team with accurate and quality fulfilment, while also identifying any stock that needs to be moved quickly to reduce waste.
- ➤ Ensure delivery timelines are met when required and all goods are used in a first in, first out basis.
- ➤ Ensure refrigeration levels are correctly maintained & produce is stored in cool room as soon as possible after unloading.
- Accurate stocktake of crate and pallet inventory.
- Maintain a safe and healthy work environment by following standards and procedures, and complying with company and legal regulations.
- Forklift operation loading and unloading pallets and boxed loads on/ off trucks and in/ out of packing shed/ cool rooms.
- > Participate in periodic cleaning programs.
- Attend on site or offsite training as directed by the company when
- ➤ Apply safe work practices in accordance with OH&S guidelines and company OHS policy.



- > Stacking, manoeuvring, and picking products in chiller and freezer rooms with a forklift.
- > Sound knowledge of work health and safety (WHS) and goods manufacturing practices (GMP) and procedures.
- > Ability to withstand working in a cold room environment ranging from three degrees and up.
- Picking fresh food stock from production line.
- Accurately packing stock.
- Repetitive manual handling.
- Managing a team.
- ➤ Time management and data entry.
- Recording produce movement and logistics.

Study Pathways:

- ➤ Certificate III in Supply Chain Operations
- ➤ Certificate IV in Supply Chain Operations
- > Certificate IV in Warehousing Operations
- Diploma of Logistics



A cold storage manager works both on-farm and in food processing facilities.

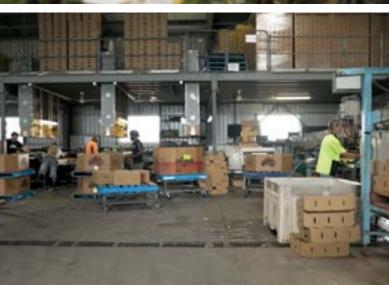
They oversee all activities in the cool rooms and large-scale freezer rooms. Cool store and freezer rooms are at most farm operations as they help to slow ripening and keep produce fresh until it is ready for delivery to market.

Courtney Thies, Pinata Farms

A cold storage manager is responsible for running, directing, and monitoring a team of other workers and ensure the efficient movement of goods in and out of cold storage.

During harvest time, the cold storage rooms have a constant flow of products coming in and going out, it is critical to keep on top of the status of products and maintain records in line with the quality system and customer requirements.





FACILITY PLANT WANAGER

A facility plant manager organises, controls, and coordinates the strategic and operational management of horticulture facilities to ensure the proper and efficient operation of all physical aspects of a facility, to create and sustain safe and productive environments for occupants.

Core Taaka:

- Manage the shed floor on a day-to-day basis.
- > Ensure all cool rooms are operating correctly.
- > Ensure all produce is packed to specifications. efficiently, without compromising on quality.
- > Lead a team of staff who manage the packing shed floor efficiently.
- ➤ Liaise with the post-harvest operations manager to predetermine daily objectives and manage staff.
- > Ensure the smooth delivery of fresh produce to the packing shed.
- Oversee the procurement of temporary labour, consumables, freight, and other services required to take the produce from farm to market.
- > Operate the traceability management systems and processes to ensure the shed floor is being run as cost effectively as possible without compromising on
- > Assist in the development of plans for the refurbishment, maintenance, and continuous improvement of the assets.
- ➤ Assist in the management of relationships (personal and contractual) with external service providers, growers, and other stakeholders.
- > Follow Occupation Health & Safety Policies/ Procedures and help ensure all packing shed staff comply with occupational health and safety, and quality assurance requirements.

Study Pathways:

- > Advanced Diploma of Agribusiness Management
- ➤ Certificate III in Supply Chain Operations
- ➤ Certificate IV in Supply Chain Operations





Check out the

Core Attributes

on page 50!





FACILITY SUPERVISOR

A facility supervisor requires high-level communication skills to coordinate a team of workers along produce processing lines.

They are responsible for enforcing the correct handling of product to meet customers' requirements including grading, packing, cool chain, hygiene, and dispatch.

Core Tasks:

- Assess incoming product regarding quality and determine grading resources.
- > Monitor quality of product throughout various stages of production including, washing, grading, and packing.
- > Rectify any issues due to mechanical damage / grading quality.
- ➤ Liaise with Harvest Supervisor / Maintenance Manager / Dispatch Manager.
- > Ensure all Quality Assurance (QA) records are correct, allowing for complete traceability.
- > Manage correct cool chain when handling and dispatch of product.
- > Ensure all personnel are trained and performing as per standard procedure.
- > Ensure all waste products are handled as per standard procedure.
- > Ensure all dispatches are as per standard procedure.

Study Pathways:

- > Certificate IV in Food Processing
- > Diploma of Competitive Systems and Practices









What is your role at Red Gem Potatoes and what does it

Jordon Kleesh

At Red Gem, we grow brown onions and several potato varieties including Kipfler, Nicola, Mozart, Royal Blue and Crème Royale. In addition, we manage many farms to help support our volumes to our customers, which are very important to this business from our biggest customers such as Coles & Hello Fresh to smaller ones located locally and interstate.

I work on the packing side of the business. After we receive the freshly harvested potatoes into our packhouse, we prepare and package them, so they are ready to be sent out to our customers quite quickly - they are in and out on the same day if necessary.

> In our packing shed, we have two different potato lines: the brush line and the wash line.

the lines to get packaged. It's a simple process but at the same time, there's a lot behind it that you've got to do to get it right.

"We are very lucky to have been the first company to utilise x-ray vision technology to help us with sizing and grading our brushed potatoes. With this, we have achieved a quality no one else can do in the industry!"

What does a typical day look like

My day typically starts with a production team meeting early in the morning to outline and organise what the goal is to achieve for that day. This involves determining what our orders are for that day and the day after and making sure we have got enough product coming in for us to package and send out.

From there, we set up the lines where we prepare the pallets and unload the potatoes from the truck.

Once the team arrives, we begin packaging. It is important to keeping track of timelines, pallet movement, people movement and make sure the lines are operating correctly and not overflowing.

My day also involves looking at quality assurance, where I check the product

to ensure it meets the customer's specifications and requirements. To do this, I pick up a bag off the production line and check if they have any internal defects and are the correct weigh.

horticulture begin? When I was 16, I began working at Red Gem as a casual employee where I would fold crates and help with packing and other general factory duties. After a year, I left to try something else.

How did your journey into

While I was at school, I was studying sports science and then I came back to work at Red Gem for a year and a half where I did inventory, quality assurance and more general factory duties and light forklift duties. From there, I left to do my carpentry apprenticeship that I had finished just as the COVID-19 pandemic started.

The COVID situation impacted my carpentry career, but luckily enough - as a result from my prior work experiences at Red Gem - I was able to find work again with the team doing casual forklift driving. What began as casual work ended up being full-time work again, and I found the opportunity to progress through the business to where I am today.

Washed potatoes must go through a washing plant before they come through

What are some common misconceptions about careers in horticulture?

There is a whole lot more to horticulture and a lot of people don't realise that until they actually start working in it.

About four months into working at Red Gem again, I had the opportunity to visit the Hillston farm in New South Wales, where I saw and learnt the entire process of planting. This included the overall groundwork that prepares a crop before planting, such as soil conditioning.

It was witnessing the planting process and the factory side of things – which are not as simple as people would think – that ignited my interest in horticulture.

The whole process is not just as simple as putting a potato into a bag. We have got so much to organise such as inventory, quality control, the factory side of things, logistics and forklifts – plus the various office roles for the business side of things.

If you're prepared to learn, there are numerous opportunities to grow your career in horticulture.

Another common misconception about working in the industry is that there is only seasonal work, which is not the case.
There are plenty of packing sheds that operate all year round because

the potatoes come in from numerous different places around Australia and not every farm does harvest at the same time. The potato industry is always growing and harvesting, and there's always work.



Why do you do what you do?

"I love my job as every day is different. One day I could be working on the factory floor or in sales or be up at the farm for a week helping that team, to then come back to the packing shed. If you've got the dedication to the industry, I find it tends to give back to you because employers notice and reward effort."

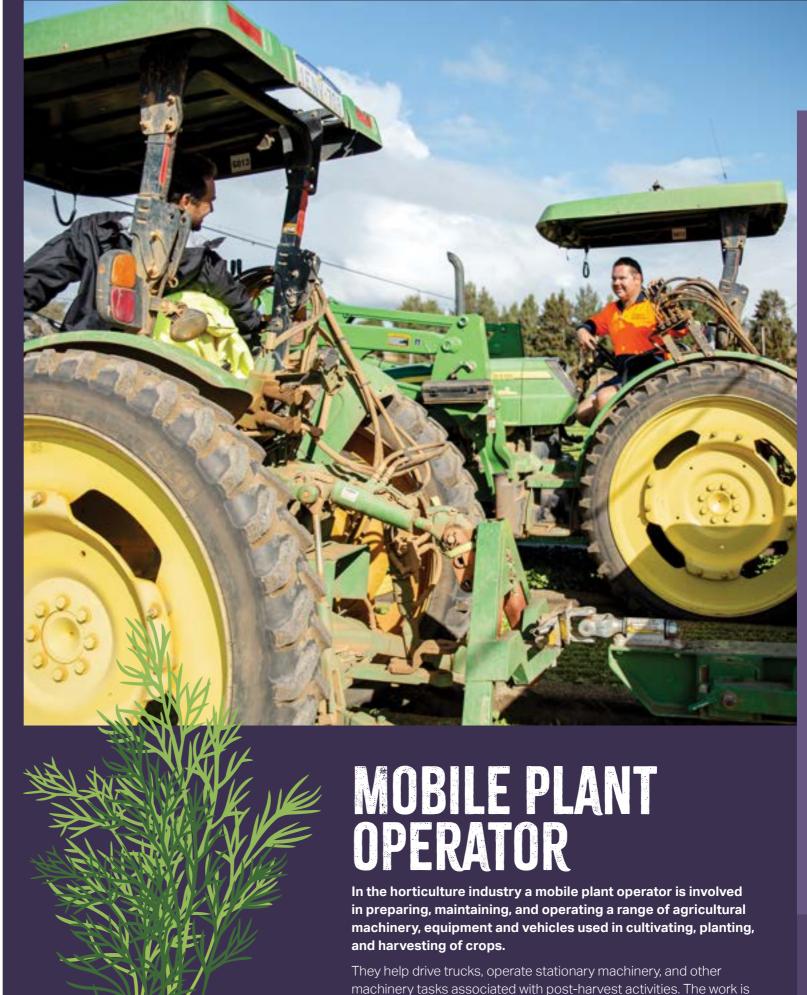
From my experience, it's never too late

to get into horticulture. I'm 25 and although I was in and out of the industry at the start, I'm glad I returned.

It's also a good feeling to see the product you're producing end up on somebody else's plate.

Overall, working for a company with a great heritage gives me the comfort and belief that we can achieve great things every day.





usually contract in nature involving mainly tractors, trucks, headers

and associated agricultural equipment.

Core Tasks:

- ➤ Adjust, repair and service farm machinery and equipment in readiness for planting and harvesting activities.
- Attach a range of equipment to tractors including plows, discs, harvesters, and sprayers.
- Operate tractors and associated equipment for soil conditioning, tilling, seeding, spraying, harvesting, baling and mobile storage systems.
- ➤ Harvest a range of produce using mechanical harvesters.
- Operate GPS guidance technology on a range of agricultural equipment.
- Transport seed and harvested produce and deliver it to customers and storage facilities.
- Operate machinery and equipment associated with draining and irrigation works and other farm activities such as fencing and pallet storage.
- ➤ Handle seed, fertiliser, and farm chemicals.
- Order spare parts for vehicles and equipment.
- Work as part of an integrated team in both seeding and harvesting operations.
- Ensure that specific allocated farm equipment is maintained.
- Liaise with supervisor to ensure all tasks are completed as required.

- Certificate II in Process
 Manufacturing
- Certificate II in Supply Chain Operations











QUALITY ASSURANCE MANAGER

A vital role in horticulture is a quality assurance manager, they are responsible for maintaining and improving high quality standards for produce.

Upkeeping high product quality and food safety standards are important to build market and consumer trust and safety.

A quality assurance manager will plan, organise, direct, control, and coordinate the deployment of quality systems and certification processes within an organisation.

Core Tasks:

- ➤ Must be knowledgeable of all state and federal regulations for the product being produced.
- Responsible for the quality control aspects of raw materials and finished products.
- ➤ Ensure weekly swabs/samples are taken and sent for testing. Acts on any swabs/ samples that come back with non-compliance levels.
- Maintain the corporate quality manual and quality records.

- > Review and report the principle causes of quality loss and nonconformance.
- Arrange, coordinate, and participate in external quality
- Implement and maintain the quality management systems and ensure continuing compliance to relevant quality standards are implemented and maintained.



Angelo Maggione

- > Age: 31
- > Job: Quality Assurance Manager, Koala Farms
- > Location: Lockyer Valley, QLD
- > Produces: Lettuce, broccoli, and baby salad leaf



My job role also has a lot to do with training, and I often train different sections of the business to make sure we continue to deliver safe and highquality products.

At the end of each day, I send our quality checks to the customer to ensure our products are meeting their requirements and specifications.

How did you end up at **Koala Farms?** I am originally from Italy and moved to Australia in 2013.

Before I moved to Australia, I was already studying agriculture in Italy. However, I didn't complete my studies over there because I couldn't see any job opportunities in that field over in that country - hence why I came to Australia.

My first job in Australia was at the Flemington Fruit Market in Sydney. My first job at Koala Farms was working in the nursery under protected cropping infrastructure, where we produced seedlings.

I did this for two years before I went back to further my studies, with a Certificate Four and then a Diploma in Horticulture.

What does your role involve?

In total, I've been working at Koala Farms for around seven or eight years, and I will probably work here a lot longer - it's a really fun job!

What advice do you have for people thinking about a career in horticulture?

In terms of working in the horticulture industry, it's not as hard of a job as it used to be, mainly because we've seen an introduction of new technologies, techniques and machinery which helps with, for example, reducing the amount of weight people might carry.

As soon as you understand if you like it or not, then go and study.

"Some advice that I would give to a young person that would like to get into the horticulture industry is first of all, go and try working in a farm."

You can study horticulture in a college from Certificate IV to a Diploma, or if you want to step-up into a higher job role, you could study food science or food technology at university.











HEALTH AND SAFETY **MANAGER & OFFICER**

Creating a safe work environment for employees is a high priority in the horticulture sector given there is a great deal of heavy machinery used that can pose a risk to workers.

Core Tasks:

- > Implement prevention programs and strategies for communicable diseases, food safety, wastewater treatment and disposal systems, recreation and domestic water quality, and contaminated and hazardous substances to improve health outcomes.
- > Undertake an audit of facilities to ensure compliance with government and industry standards.
- > Examine equipment specifications, and test machines, equipment, and clothing to ensure compliance with safety standards and serviceability.
- > Ensure the correct personal protective equipment is used.
- > Record and investigate incidences in the workplace.
- > Conduct tests in work areas to detect toxic fumes, explosive gas-air mixtures, and other work hazards.

> Conduct safety meetings and deliver safety training that is role specific.

Study Pathways:

- Advanced Diploma of Work Health and
- Certificate III in Work Health and Safety.
- Certificate IV in Work Health in Saftey.
- > Diploma of Work Health and Safety.

It is the responsibility of the health and safety managers and officers to ensure procedures, equipment and personal protective wear is up to standard.

They will regularly conduct workplace audits to ensure businesses adhere to Australian government and industry standards. In addition, they will develop, implement, and evaluate programs for improved workplace health and safety and help to train staff.



FINANCE MANAGER

A finance manager coordinates all financial aspects of the horticulture business, from processing sales and developing strategies to managing cash flow for procurement of suppliers.

lead a team to draw up budgets, calculate expenditure, profits, and payroll. Attention to detail is critical as a finance manager to ensure

The finance manager will liaise

to help develop short- and longterm financial plans and profitmaking decisions. In addition, they will regularly meet with supervisor/manager teams to review performance, forecasts, continuous improvement initiatives, innovations, safety, and staffing matters.

Core Tasks:

- Manage all payroll tasks internally insuring compliance and consistency.
- > Examines economic and market trends and conditions as they affect the company and modifies policies to take full advantage of any changing circumstances.
- > Ensures positive direct team performance and morale is maintained and meeting performance standards.
- Manage and oversee all finance transactions including Profit & Loss, budgets, and expenses.
- ➤ Manage all appropriate levy payments and lodgements in required time frames.
- ➤ Reconcile and correct all growers and trade accounts, including invoicing, freight management, and reconciliation of all bank accounts.
- ➤ Conduct appropriate internal audits related to levy or other key areas within the financial or management system when required.



HUMAN RESOURCE MANAGER

A human resource manager is responsible for overseeing the hiring, administration, and training of staff.

They assist in motivating and developing staff in their roles through upskilling and training to achieve personal and company goals.

Core Tasks:

- > Determining, implementing, monitoring, reviewing, and evaluating human resource management strategies, policies and plans to meet business needs.
- Advising and assisting other managers in applying sound recruitment and selection practices, and appropriate induction, training, and development
- > Developing and implementing performance management systems to plan, appraise and improve individual and team performance.
- Representing the organisation in negotiations with unions and employees to determine remuneration and other conditions of employment.
- Developing and implementing occupational health and safety programs and equal employment opportunity programs and ensuring compliance with related statutory requirements.
- Overseeing the application of redundancy and other employee retrenchment policies.
- Monitoring employment costs and productivity levels.
- May train and advise other managers in personnel and workplace relations matters.



HORTICULTURE RESEARCH & DEVELOPMENT OFFICER

Private companies, grower organisations and state government agencies make large investments in research and development to support the success of Australian horticulture businesses.



and development (R&D) officers help determine, implement, and monitor research and development strategies, policies and plans for the horticulture sector.

Daily tasks involve procuring new investments, writing research proposals, and pitching new concepts to the industry's strategic advisory panel while working closely with delivery partners, researchers from universities, private, government research organisations.

A horticulture research and development officer initiates research projects to help improve the horticulture sector. They work closely with stakeholders to understand the challenges and areas that need further investigation. During their research they will create a report which is then shared with stakeholders, beneficiaries, and other researchers to further improve the sector.

Core Taaka:

- Determining, implementing, and monitoring research and development strategies, policies,
- Leading major research projects and coordinating activities of other research workers.
- Assessing the benefits and monitoring the costs and effectiveness of research and development activities.
- > Interpreting results of research projects and recommending associated product and service development innovations.
- Providing advice on research and development options available to the organisation.
- ➤ Monitoring leading-edge developments in relevant disciplines and assessing implications for the organisation.
- ➤ May publish results of significant research projects.

- Advanced Diploma of Horticulture
- ➤ Certificate III in Production Horticulture
- ➤ Certificate VI in Horticulture
- > Diploma of Horticulture
- > Diploma of Production Horticulture
- ➤ Diploma of Agribusiness Management
- ➤ Bachelor of Agriculture Science











- > Plan, develop, and organise advertising policies and campaigns to support sales objectives.
- Advise executives and clients on advertising strategies and campaigns to reach target markets, creating consumer awareness, and effectively promoting the attributes of goods and services.
- Coordinate the production of advertising campaigns involving specialised activities, such as artwork, copywriting, media scripting, television and film production and media placement, within time and budget constraints.
- Interpret and predict current and future consumer trends.
- Support business growth and development through the preparation and execution of marketing objectives, policies and programs.
- Commission and undertake market research to identify market opportunities for new and existing goods and services. Analyse consumer preferences and patterns data.
- Advise on all elements of marketing such as product mix, pricing, advertising, and sales promotion, selling, and distribution channels.

Study Pathways

- > Advanced Diploma of Marketing and Communication
- Certificate VI in Marketing and Communication

MARKETING MANAGER

A marketing manager identifies market opportunities and advises on the development, coordination, and implementation of plans for pricing and promoting horticultural produce.

They will also conduct research and collect data on potential demand and market characteristics for produce. By using consumer

patterns and preference data, they will be able to forecast market changes and new opportunities for promotion.





SALES MANAGER

In a horticulture business, the sales manager position is a forward focused role, designed to drive future initiatives throughout a company's operations.

Sales managers procure suppliers and coordinate produce through the supply chain and out the farm gate. Efficiency in their role will ensure optimum commercial returns for the business.

Sales managers look to forecast future market demands and plan for successful production. They are also responsible for market penetration and sourcing of new varieties of produce.

Working closely with the management team, the sales manager will help devise and implement continuous improvement initiatives and efficiencies across the operation to optimise financial returns.

- > Contribute to the development of short- and long-term company plans.
- > Forecast future market demand and formulate plans to enable the business to meet those demands. Organise production, packaging, pricing, plant variety and planting scheduling accordingly.
- ➤ Ensure overall profitability within broad policy limits.
- > Assist with planning and developing the structure of the organisation, ensuring appropriate resourcing.
- > Conduct regular meetings with supervisor/manager team to review performance, forecasts, continuous improvement initiatives, innovations, safety, and staffing matters.
- Assist with communications between divisional business functions and consult with operations manager as required.
- Liaise with customers to manage their expectations and service their needs.

- product and maintain effective communications.
- > Procure produce from suppliers including alternate product lines or same products to supplement short falls of supply in accordance with approved supplier program.
- Analyse supplier returns and account for appropriate deductions to ensure profitability and maintain supplier relations.
- Provide input to site improvements and facility upgrades.
- Regular product/produce quoting and price negotiation.
- Product market research. assessment, and development.
- > Contract negotiation procurement and sales.

- > Certificate III in Business-to-**Business Sales**
- ➤ Certificate IV in Business
- > Diploma of Business











MANAGER

An operations manager oversees a company's administration and overarching business practices.

Their goal is to maximise efficiency and streamline processes.

It is important the operations manager works closely with the company executives including the finance manager to ensure the lowest operating cost and highest profit.

Study Pathways:

their performance.

and safety requirements.

Oversee staff activities and monitor

➤ Advanced Diploma of Agribusiness Management

> Coordinate the implementation of occupational health

▶ Diploma of Agribusiness Management











CORE ATTRIBUTES



ATTENTION TO DETAIL

Pay close attention to your work to identify and diagnose issues correctly.



COLLABORATION

Work within a team to complete daily tasks and provide input to help improve work systems.



CRITICAL THINKING

Have a deep understanding of relevant processes to be able to analyse and make effective changes.



DECISION MAKING

Quickly find the best solution ensure production runs as efficiently as possible.



NETWORKING

Be able to quickly build rapport with industry persons to help expand networks and knowledge base.



PROACTIVE

Quickly and seamlessly identify areas in need of assistance and help where possible.



STRONG RECORD KEEPING

Take detailed notes on daily activities to assist with future operations and improvements.



STRONG WORK ETHIC

Complete tasks on time and to the highest standard.



COMMUNICATION

Communicate clearly and concisely with stakeholders including growers, scientists, and farm managers.

Move smoothly between priority tasks.



CREATIVE THINKING

Explore, experiment, develop, and implement more efficient systems or equipment.



LEADERSHIP

Coordinate a team through daily activities and help to teach them the relevant skills.



PROBLEM SOLVING

FLEXIBILITY

Use creative and analytical thinking to find solutions.



SELF-MOTIVATED

Many tasks are completed independently, so is important to be able to motivate yourself.



TEAMWORK

Work collaboratively with growers, industry, and government.



TIME MANAGEMENT

Balance multiple tasks at once and ensure they are completed in a timely manner.

Training Providers

To search for up-to-date training providers of horticulture-related certificates and diplomas in Australia, visit the Australian Government Myskills website at myskills.gov.au

The training providers offer Certificate VI and above. This is a complete list as of June 2022.

TRAINING PROVIDER	LOCATION	STATE
Canberra Institute of Technology	Canberra	ACT
Australian Health and Horticulture Institute Pty Ltd	Sydney	NSW
Australian Training and Consulting	Tamworth	NSW
Joblink Plus	Tamworth	NSW
Learning Sphere	Sydney	NSW
Local Government Training Institute	Sydney	NSW
RURALBIZ Training	Dubbo	NSW
TAFE NSW	20 locations across NSW	NSW
Tocal College	Griffith/ Newcastle	NSW
ALS Certificates and Diplomas	Brisbane	QLD
Australian Institute of Agriculture Pty. Ltd.	Woodburn	QLD
Aventia Institute	Brisbane	QLD
Brisbane College of Horticulture	Brisbane	QLD
Global Institute of Education	Brisbane	QLD
HS Business School	Brisbane	QLD
TAFE Queensland	7 locations across QLD	QLD
ARO Education Services Pty Ltd	Adelaide	SA
GrowSmart Training	Loxton	SA
Ironwood Institute	Adelaide	SA
TAFE SA	8 locations across SA	SA
Wakefield International College	Adelaide	SA
TasTAFE	7 locations across Tasmania	TAS
Bendigo TAFE and Kangan Institute	Bendigo	VIC





TRAINING PROVIDER	LOCATION	STATE
Box Hill Institute	Greater Melbourne	VIC
Chisholm Institute	Greater Melbourne	VIC
Community College Gippsland Ltd	Gippsland	VIC
VEG Education	Werribee	VIC
Federation University of Australia	Ballarat	VIC
Go Tafe	Central	VIC
Holmesglen Institute of TAFE	Melbourne	VIC
Melbourne Polytechnic	Melbourne	VIC
Smarter PTY LTD	Ballarat	VIC
Southwest TAFE - Glenormiston College	Warrnambool/ Hamilton	VIC
SuniTAFE	Mildura/ Swan Hill	VIC
Swinburne University of Technology	Melbourne	VIC
TAFE Gippsland	Gippsland	VIC
Technical Institute of Victoria	Melbourne	VIC
The Gordon	Geelong	VIC
The Management Edge Pty Ltd	Melbourne/ Sydney	VIC
THS Training	Sydney	VIC
Australian College of Agriculture and Horticulture	Melbourne and Cairns	VIC/QLD
Central Regional TAFE	9 locations across regional WA	WA
Farm Information Services	Perth	WA
North Metropolitan TAFE	Perth	WA
South Metropolitan TAFE	Perth	WA
South Regional TAFE	South Perth	WA

ABOUT AUSVEG

AUSVEG is the prescribed Peak Industry Body representing the interests of the Australian vegetable and potato industry. AUSVEG is a not-for-profit, member-based organisation that is run by growers, for growers.



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