

# Making “middle managers”: Workforce development for agricultural industries in transition

Michael Santhanam-Martin<sup>a</sup>, Lisa Cowan<sup>b</sup>

<sup>a</sup>University of Melbourne, [mpmartin@unimelb.edu.au](mailto:mpmartin@unimelb.edu.au)

<sup>b</sup>Agriculture Victoria, [lisa.Cowan@ecodev.vic.gov.au](mailto:lisa.Cowan@ecodev.vic.gov.au)

**Abstract:** *The availability of suitably skilled people is being increasingly recognised as a critical element for success in agriculture, yet this can be challenging to achieve. The perennial fruit industry in Australia’s Goulburn-Murray region is an example of this. In 2015, employers in this industry identified a shortage of people for ‘middle management’ roles as a particular current concern. This paper outlines the findings of a scoping study focused on developing a better understanding of the issues affecting the ability of fruit growers in this region to attract, retain and develop appropriately skilled ‘middle managers’. The study was informed by a ‘systemic’ approach to workforce development, according to which the availability of suitably-skilled workers arises from the dynamic interactions of elements in the workforce system. Based on structured interviews with the managers of twenty fruit growing businesses, we developed a typology of four typical workforce structures that are found in businesses of different sizes, including identification of the most common job titles and typical duties for these jobs. We discuss the approaches that employers used to recruit workers, including both internal and external recruitment pathways. The findings of this study allow us to begin identifying the range of entry points to jobs, and the career progression pathways, that currently exist for workers in the perennial fruit industry, and to identify opportunities for industry collective action to address current workforce challenges. As employed workers come to play increasingly important roles in family farm businesses, systemic understandings of workforce development will become increasingly important within the field of farming systems research.*

**Keywords:** *Horticulture, career paths, workforce development, workforce planning*

## Introduction

Changes in the social organisation of farming are one aspect of the changes that farming systems undergo in response to alterations in aspects of their context such as markets, policies, environmental conditions and available technologies (Alston, 2004; Nettle, 2015b). One trend, evident in all industrialised countries, is that of increasing farm size, alongside a continued predominance of family farming (Calus & Van Huylenbroeck, 2010; Hoppe & MacDonald, 2016; Lowder, Skoet, & Raney, 2016). For family farms, increasing scale requires a range of changes in social organisation as they move from small, even solo owner-operator, businesses to operating models that rely on multiple people with a variety of capabilities. For example, there can be changes to ownership and management structures, and to succession processes, and these are influenced by tradition and family social processes, as well as business drivers (Chiswell, 2016; Cowan, Wright, Kaine, & Cooksey, 2015; Nalson, 1964).

Increasing farm size also requires changes in the organisation of farm work (that is, who does what work). An on-going trend in this area is the increasing importance of hired workers and contractors, in comparison to contributing family workers (Bitsch, 2009; Findeis, 2002). In part, as argued by Perry (1982), mechanisation in agriculture has been more effective in displacing family labour than hired labour, but there are other dynamics also involved, including changes in gender relations and succession processes and the increasing role of off-farm work in many farm family livelihood strategies (Alston, 2004; Chiswell, 2016).

Additionally, the increased technical specialist knowledge needed to manage modern farms means that business managers become more reliant on technical specialists, as advisors or employees (AgriFood Skills Australia, 2015). Yet family farms still represent a very different employment context, compared to that offered by the large corporations where most workforce development and careers research has been conducted (Bitsch, 2009). It is in this context that the topic of farm workforce development has come to the attention of farming systems scholars in Australia and elsewhere. Workforce development refers to actions taken to attract, retain and develop workers. The concept has application at individual business or farm scale, where it is also referred to as personnel management or human resources management (Bitsch, 2009), but it has relevance also at industry sector, regional and national scales (Growcom Australia, 2013; Nettle, 2015a; Nettle, Oliver, Brightling, Buchanan, & Williamson, 2008; TFGA, 2015).

Changes in the organisation of farm work, discussed above, have important implications for learning and knowledge systems, education, extension and advisory services: if the people involved in farming are different then so too are the people who must be involved in learning and knowledge systems. In particular, as farms get larger, and as employed workers take on leadership and decision-making roles that in the past would have been the domain of family farm owner-managers, the role of the employed farm manager becomes increasingly important to the overall success of farms and industry sectors (Bitsch, 2009; Bitsch & Yakura, 2007; Nettle, Semmelroth, Ford, Zheng, & Ullah, 2011).

As a contribution to research on both agricultural workforce development and farm learning and knowledge systems, it is thus relevant to ask: how are professional farm managers made? We use the broad term “made” here, in preference to a narrower one such as “trained” or “educated”, to denote that becoming a farm manager involves more than the acquisition of knowledge and skills: it involves also people’s personal and career journeys. Why do they enter or become attracted to a sector? Why do they choose to stay or go? What career progression pathways do they follow, or decide not to follow? While we know quite a lot about how family farm owner-managers are made through the processes of family farm succession (Chiswell, 2016; Fischer & Burton, 2014; Gasson & Errington, 1993; Lobley, Baker, & Whitehead, 2012), we know much less about the processes whereby employed farm managers are made (Bitsch & Yakura, 2007), especially in a context such as Australia where formal education and the acquisition of qualifications has not traditionally been the dominant pathway (Seymour & Barr, 2014).

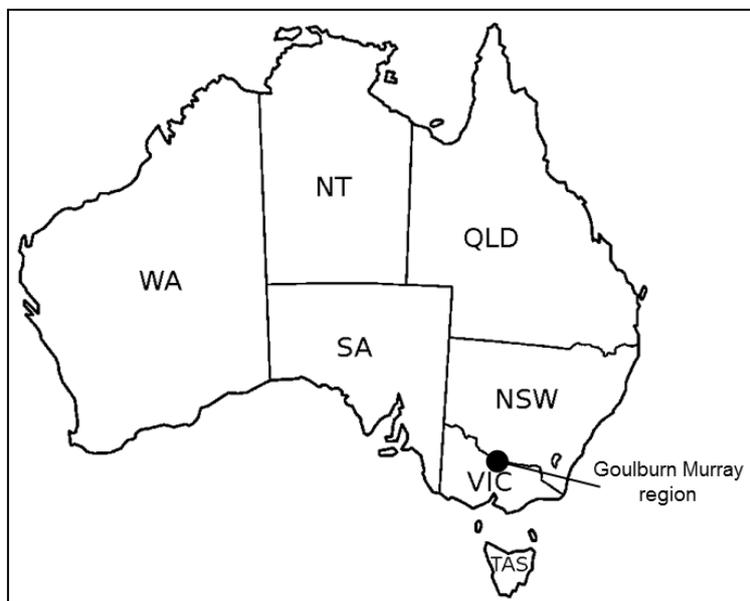
### **Middle managers for the Goulburn-Murray fruit industry**

In this paper we explore the topic of how employed farm managers are made through a case study of changing work organisation on orchards in the Goulburn-Murray region of the Australian state of Victoria (see Figure 1). We chose this region and industry for the study because of strong industry engagement with the issue, driven out of significant industry transition. Horticulture and dairy are typically the agricultural industry sectors with the highest level of dependency on hired labour but, compared to dairy, personnel management processes in horticulture industry have been researched far less (Bitsch, 2009).

The Goulburn-Murray fruit industry produces pome fruits (apples, pears and nashis), stone fruits (peaches, nectarines, plums, apricots) and cherries. In 2013 there were 306 fruit farms in the region, with a total area planted of some 11,500 hectares (RMCG & GVFGSWG, 2013, pp. 24-25). Almost all these farms remain family-owned and operated. The Goulburn-Murray fruit industry is of national significance, producing 46% by volume (in 2010-11) of the combined national crop for the fruits listed above, including 86% of the nation’s pears (RMCG & GVFGSWG, 2013). The farm gate value of fruit production in the region was \$485 million in 2013, which is 30% of the total value of agricultural production in the region (RMCG & GVFGSWG, 2013). There is also a significant food processing industry within the region.

The industry has been in a period of significant restructuring and transition over recent years (RMCG & GVFGSWG, 2013), and this on-going change provides the context for this research. Major trends include:

- An increase in the area planted (26% increase between 2001 and 2011), combined with increasing planting density;
- On-going decline in the number of growers as businesses consolidate;
- A significant decrease in fruit demand from the major fruit processor, which has led to a shift in the varieties planted towards fruit for the fresh market;
- A growing interest in export markets, and growing export sales (although export sales remain a small portion of total production).



**Figure 1.** Location of the Goulburn-Murray region, in the Australian state of Victoria

These trends have implications for the structure of the industry's workforce. As individual businesses get larger and adopt more intensive (higher density) planting systems, they require more permanent employees, sourced from outside the business-owning family. There are several trends, including the shift from processing to fresh fruit production, increasingly stringent quality specifications from buyers and increasing pressure on profit margins that are driving a requirement for greater precision in orchard management, thus requiring higher skill levels and effective supervision of workers.

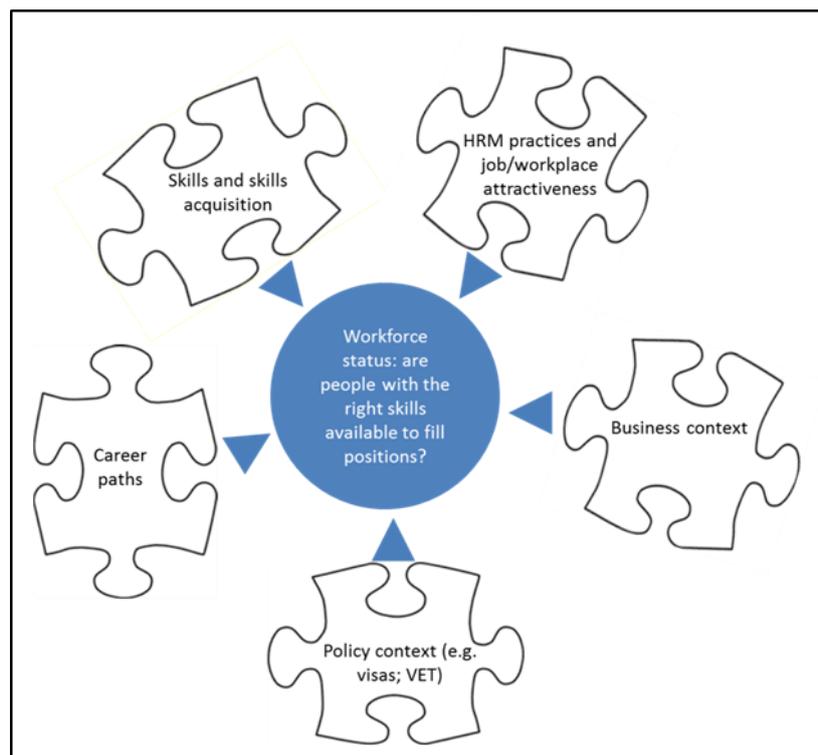
In a strategic planning exercise in 2015, fruit growers identified labour and skill shortages as "the major concern for their enterprises" (Catalyst Exchange, 2015, p. 13). While this concern related in part to the availability of seasonal works for fruit picking and packing, it also related to the availability of suitably skilled people for what the report refers to as "middle management" roles (Catalyst Exchange, 2015, p. 13). What is meant by middle management is not explored or defined in the 2015 report, and unpacking employers' understandings on this topic is one of the tasks tackled in this paper. Generally, in human resource management middle management refers to a layer of employees who sit between senior management and the general workforce. They are "active agents at the frontier of control" (Delbridge & Lowe, 1997, p. 411), "smoothing exceptions, handling exceptions, overcoming unexpected problems, and reaching goals and objectives" (Bitsch & Yakura, 2007, p. 2). In family farm agriculture, middle managers also provide a critical interface between the owner-managers and the non-family workers (Bitsch & Yakura, 2007).

The study drawn on in this paper took place in collaboration with industry stakeholders, as part of efforts to understand and address this workforce challenge. The study aimed to contribute to an improved understanding of the issues affecting the ability of fruit growers in the Goulburn Valley to attract, retain and develop (that is, "make") appropriately skilled middle managers, through application of a systemic view of workforce development.

## Systemic workforce development

When thinking about workforce development needs, agricultural industries and policy-makers have historically tended to focus on labour supply, and on skills gaps (Nettle, 2015b). Understanding the skills needs of a business or industry and understanding the mechanisms whereby workers can acquire these skills are certainly central to workforce development efforts. Nettle (2015b) argues, however, that effective workforce development for agricultural industries requires a broader focus than this. Nettle and Oliver (2009, p. 2) refer to this broader and more inclusive approach to workforce developments as a ‘systemic’ approach. ‘Systemic’ here denotes an awareness that the status of an industry’s workforce arises from the dynamic interactions between several different elements, including the policy environment, the formal training system, the human resource management practices of individual employers, the interactions between employers within a sector or region, and the interactions between other stakeholders in regions and industries.

Thus, in addition to seeking to understand labour supply and demand issues and skills requirements, a systemic approach to workforce development needs to consider the way people enter and move through a sector (i.e. career pathways); how individuals’ skills are formed; the attractiveness of workplaces and of the jobs on offer; how policy (for example visa policies and vocational educational and training policies) affects workforce development; and the range of other stresses and pressures on businesses that create the business context for workforce decisions and human resource management practices (Nettle & Oliver, 2009). This range of elements that interact to influence an industry or region’s workforce is illustrated in Figure 2.



**Figure 2.** Interacting elements that affect the status of a sectoral or regional workforce

Our study sought to begin unravelling how the elements depicted in Figure 2 are impacting on the ability of individual employers and the Goulburn-Murray fruit industry to “make” middle managers for their orchards and for their industry. In particular, we sought to understand:

- How work is organised on orchards of different sizes and types (and hence how many “middle managers” are needed, to do what work; and
- How employers approach the task of filling positions (which provides insight into employers’ perspectives on the processes whereby managers are made).

## Methods

This paper is based on analysis of structured interviews with 20 fruit growers in the Goulburn-Murray region, carried out in September 2016. Recruitment was purposive, with the aim being (a) to include a diversity of employers of different types, including orchards of different sizes; and (b) to focus on orchards that are large enough to have permanent staff. In most cases, we interviewed business owner-managers (sometimes as couples), but in some cases, we interviewed senior employees. The interviews ranged in duration from 20 to 120 minutes.

The questionnaire instrument was an expanded version of one used by Nettle & Oliver (2009) and covered the characteristics of the business, description of the current workforce and work organisation, recent and planned recruitment, recruitment methods, use of position descriptions and general reflections on workforce issues. Many of the questions were designed to elicit category data, to facilitate identification of patterns. Some open-ended questions were also included to enable data capture about topics that relied on more contextual information. The full instrument is included in Santhanam-Martin and Cowan (2017)<sup>1</sup>.

The size distribution of the participating orchards is shown in Table 1. The sample includes business that only grow fruit (no storage or packing), businesses that grow, store and pack their own fruit, and integrated fruit businesses that grow, store and pack their own fruit and also store and pack fruit for other growers.

**Table 1.** Distribution of orchard size for the interview sample.

Size	Size category	No. of Orchards
< 50ha	1	2
50 - 99ha	2	4
100 - 199 ha	3	5
200 - 399 ha	4	5
> 399 ha	5	4
TOTAL		20

All the interviews were transcribed in full for qualitative analysis, as well as being used to complete data tables for quantitative and category data. We entered the quantitative and category data into a series of Excel spreadsheets to facilitate cross-case analysis and pattern identification (following Bazeley, 2009) in relation to the topics and questions listed above.

We used qualitative data analysis software (QSR International, 2013) to code the data according to themes that were identified as potentially relevant to understanding an employer's approach to meeting their workforce needs, and to understanding the major challenges they face in doing so. For data coded to each theme, we carried out cross-case comparison to identify patterns (commonalities and dissimilarities).

This is a scoping study, based on limited data gathered from a small pool of research participants. Our findings reflect the experiences of the particular employers we spoke to, and are not representative of the experiences of all fruit growers in the Goulburn-Murray region. Importantly, this study looked at workforce issues from the perspective of *employers* only. This study begins the process of understanding, for this industry and region, the system of influences on workforce status shown in Figure 2. This case study also suggests more general findings about workforce development challenges in agriculture, which we present in the discussion and conclusion sections of the paper.

<sup>1</sup> Available at <https://minerva-access.unimelb.edu.au/handle/11343/194667>

## Results

### Workforce structure

The work involved in running an orchard included orchard operations, coolstore and packhouse operations (for those businesses that operated these facilities), administration operations including payroll and bookkeeping, and marketing operations. Some large businesses also ran their own heavy vehicle transport operations. The people who did this work included business owners, contributing family members, permanent employees and non-permanent (casual or seasonal) employees. The number and type of workers involved in these different operational areas varied with business type and business size. A summary of the data about workforce size and structure provided by each of the 20 orchard and integrated fruit businesses who participated in this research is shown in Table 2 below.

**Table 2.** Summary of workforce structure for the interview sample

Interview ID	Business type <sup>2</sup>	Orchard Size category <sup>3</sup>	Total permanent workforce (inc. family) <sup>4</sup>	Approximate peak seasonal workforce
I2	Orchard	3	6	55
I3	Orchard	2	4	55
I4	Orchard	2	3	Not provided
I5	Orchard	3	6	105
I6	Integrated	4	26	Not provided
I9	Orchard	2	3	25
I10	Orchard	4	9	115
I11	Orchard	3	5	Not provided
I12	Orchard	4	7	Not provided
I13	Orchard	3	10	25
I14	Integrated	4	11	Not provided
I15	Orchard	5	21	Not provided
I17	Orchard	1	3	10
I18	Orchard	2	4	10
I19	Orchard	1	4	Not provided
I20	Integrated	4	39	200
I21	Integrated	5	50 (approx.)	100
I22	Integrated	5	60 <sup>5</sup>	500
I23	Integrated	5	18	170
I24	Integrated	3	33	Not provided

All but one of these businesses can be described as family businesses, in the sense that:

- a. the principals [owners] are related by kinship or marriage,

<sup>2</sup> 'Integrated' businesses store, pack and market fruit sourced from other growers, as well as their own fruit. Many 'Orchard' businesses also store and/or pack and market their own fruit.

<sup>3</sup> As per Table 1: '1' = <50ha; '2' = 50 - 99ha; '3' = 100 - 199 ; '4' = 200 - 399 ha; '5' = >399 ha

<sup>4</sup> No adjustment has been made to account for part-time workers. In some cases the effective full-time equivalent workforce is slightly less than the figure in this column due to the presence of part-time workers (often including family members).

<sup>5</sup> This is for the fruit growing division of the business only.

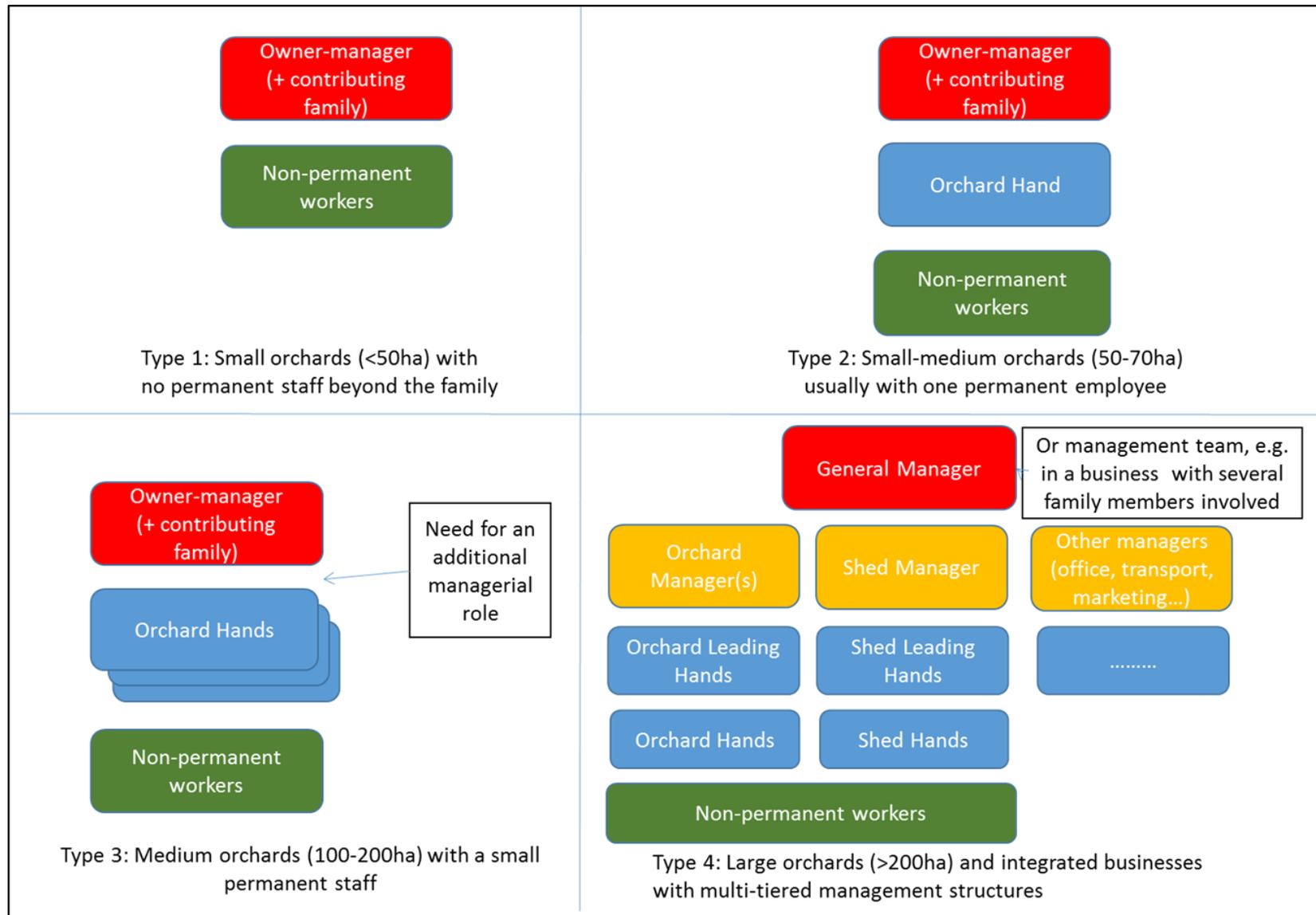
- b. business ownership is usually combined with managerial control, and
- c. control is passed from one generation to another within the same family (Gasson & Errington, 1993).

The number of members of the business-owning family working in the business was quite variable. For nine out of the thirteen orchard businesses, family members comprised half or more of the businesses' permanent workforce. This extent of family involvement influenced businesses' employment and management practices in several ways, as noted in the discussion section below.

To generate further insight about the workforce structure for fruit-growing businesses of different sizes and types, we undertook a simple form of cluster analysis of the data presented in Table 2. The analysis involved comparing the orchard size, permanent workforce size and business type (orchard or integrated) for each of the twenty businesses, and identifying clusters of businesses that were most similar across these variables. This analysis generated four categories of businesses, as follows:

1. Small orchards with no permanent staff beyond the family – 'JUST US'. The two orchards in this category were both less than 50 hectares in size, with one Owner-Manager in charge and family members carrying out all other routine tasks including administration.
2. Small-medium orchards usually with one permanent employee – 'US AND OUR WORKER'. These four orchards were from 50 to 70 hectares in size. Three of the four had a full-time employee in an orchard operations role. In two cases, this was an 'Orchard Hand', while in the third case the employee had the title of 'Orchard Manager' and worked on a second property some distance away from the owners' home property. One orchard in this category had three family members involved full-time, and no permanent employees. Two of these orchards also employed a part-time Administration Assistant.
3. Medium orchards with a small permanent staff reporting directly to the owner-manager - 'US AND OUR STAFF – AND WE NEED SOMEONE TO STEP UP'. The four orchards in this category were between 100 and 200 hectares in size and had up to three permanent staff under the direct supervision of the Owner-Manager. One of these four orchards had four family members involved full-time, and only one permanent employee, whereas the other three orchards had three employees with various job titles including Orchard Hand and Orchard Manager. Two orchards in this category had identified a specific employee who was being trained for an orchard management role, and a third orchard had previously tried and failed to recruit someone to an Orchard Manager position. This suggests that orchards in this size range are at the limit of what can be managed by a single Owner-Manager without a further level of devolved responsibility. (Unless there are several family members to share the load).
4. Large orchards and integrated businesses with multi-tiered management structures - 'WE HAVE A FORMAL MANAGEMENT STRUCTURE'. The ten businesses in this category all had 200 hectares or more of orchard area and nine of them also operated coolstores and packing sheds. Seven of them stored and packed fruit on behalf of other growers as well. They were typically structured with a General Manager, several division or department managers (such as Orchard, Shed, Office or Transport Managers) and also a tier of Supervisors or Leading Hands (in the orchards and in the shed). Often there were several Orchard Managers responsible for individual orchard locations.

This typology, illustrated in Figure 3, helps to identify the typical permanent workforce needs of fruit growing businesses of different sizes and types, and identifies that it is orchards in Category 3 and 4 that have roles for "middle managers".



**Figure 3.** Workforce structure for four broad types of fruit-growing businesses.

## Typical jobs and duties

Another aspect of understanding workforce structure in the fruit industry is to identify the typical jobs that are found within businesses. In keeping with the aim of this study, we focussed on understanding the typical jobs that are found in the fruit industry's permanent workforce, in orchards, coolstores and packhouses. Some interviewees found it difficult to identify a job title for some workers, particularly where there were multiple family members working together in the business, without formally-specified roles or position descriptions. Nevertheless, after some discussion interviewees were able to settle on a title that they felt was generally appropriate to the duties performed by each worker.

Across the interviews, there was general agreement about the following job titles and their associated duties:

- Owner Manager/General Manager
- Orchard Supervisor/Leading Hand
- Orchard Hand
- Office and administrative jobs
- Seasonal jobs

Full descriptions of these jobs can be found in Santhanam-Martin and Cowan (2017).

The title Orchard Manager was widely used by interviewees, but referred to distinctly different jobs with different levels of responsibility. At the upper end of responsibility, an Orchard Manager had autonomous responsibility for achieving desired production outcomes from the orchards they were responsible for. Some large businesses employed several Orchard Managers for different orchard areas, with a single manager often responsible for an area of 80-100 hectares. Other businesses employed a single Orchard Manager to be responsible for all the orchards – up to an area of over 200 hectares. Depending on the size of the area to be managed, an Orchard Manager of this type would be more or less involved in the actual physical work involved:

*[Y]our orchard manager in my situation, he's almost like a fruit grower. He actually - he has to be able to make decisions on how to grow fruit. [...]. [W]hilst I might make some of the more high level [decisions] with him, he's making 80 or 85 per cent of the decisions (Niccolo (I14), describing an Orchard Manager who is responsible for all the business' orchards).*

At the lower end of responsibility, in some businesses an Orchard Manager was a senior permanent employee with responsibility for supervising staff and implementing instructions given to them by a more senior manager, often the Owner-Manager. This type of Orchard Manager made few autonomous decisions, rather they followed instructions. For businesses consisting of several geographically separated orchard areas, the Orchard Manager of this type often managed the day-to-day work on a particular orchard area:

*Well he manages the orchard at [our other location]. [...]. I tell him what to do and he supervises the people there and gets them to do it (Xavier - I24).*

Some people who were employed as Orchard Managers (of either of the types discussed above) had relevant qualifications such as Certificates or Diplomas, but this was the exception rather than the rule. Employers placed much more emphasis in their recruitment decisions on someone's practical orchard management experience, as discussed further below.

Table 3 provides a summary of the main types of orchard tasks, and the people who are usually responsible for them. The typical structure of these roles across the four categories of business discussed above is shown in Figure 3. Interviewees described a similar hierarchy of jobs in their packing shed to that described above for their orchards.

One important feature to note from the task ranking in Table 3 is that the tasks performed by someone with a particular job title are strongly influenced by the size of the business and the size of its workforce. Hence, in smaller orchards, it was common for the Owner-Manager to perform all tasks themselves. The role of Orchard Manager could also cover this entire range of tasks from routine physical orchard operations (planting, pruning, training, slashing, spraying) up to higher level management tasks such as preparation of budgets. Several interviewees who managed medium-sized orchards commented that this could create challenges for recruiting and retaining people in Orchard Manager positions, for example:

*What is an orchard manager for example? Now it could be someone just driving around and making decisions hypothetically or it could be one that needs to get in and get his hands dirty when needed. [...] I'm not big enough to justify a full time just orchard manager as in - without doing any physical work, so it's sort of a bit of both (Mitul, I13).*

Orchard Managers must be willing to carry out these lower-level routine tasks, particularly in the quieter seasons of the year when this is the only work available.

A second and related feature of orchard work to note from Table 3 is that it is common for orchard jobs to include a wide range of tasks and duties. A number of interviewees spoke of the need for employees to be multi-skilled and flexible.

A final point to note from Table 3 is that some skills in supervising the work of other people are part of the job requirements for jobs over the full range from Orchard Hand up to General Manager since Orchard Hands are sometimes called on to supervise seasonal workers undertaking routine picking.

**Table 3.** Indicative ranking of orchard tasks and allocation to roles

Level	Task/duty	Who?*
High level tasks	Marketing and negotiating with customers	GM-OwM
	Staffing decisions and staff development	GM-OwM
	Business planning (e.g. crop and variety selection, development decisions, equipment purchasing)	GM-OwM
	Preparation of annual budgets	GM-OwM-OrM
	Day-to-day and week-to-week cultural decisions such as fertiliser applications and pest control	GM-OwM-OrM
	Managing day-to-day and week-to-week work flow and delivery to achieve production to specification. Includes supervision and management of OLH and OH	OwM-OrM
	Record keeping for orchard operations	OwM-OrM-OLH
	Quality control during harvest	OwM-OrM-OLH
	Supervising orchard hands	OwM-OrM-OLH
	Supervising pickers & pruners	OwM-OrM-OLH-OH
	Spraying, slashing, irrigation operation & maintenance	OwM-OrM-OLH-OH
	Skilled pruning, planting, tree training	OwM-OrM-OLH-OH-SL
	Routine thinning and pruning	OwM-OrM-OLH-OH-SL
Low level tasks	Routine picking	SL

\* Key: GM = General Manager; OwM = Owner-Manager; OrM = Orchard Manager; OLH = Orchard Leading Hand; OH = Orchard Hand; SL = Seasonal Labourer

## Approaches to meeting workforce needs

In this section, we present findings on how employers approach the task of meeting their workforce needs, and on experiences these employers had with recruitment including positions that were difficult to fill. There are two basic approaches that business can take to recruitment: (i) developing the skills of people already in the business so that they can be promoted into more senior positions (internal recruitment) and (ii) bringing in new people (external recruitment).

### *Internal recruitment*

Many interviewees described experiences of internal recruitment, where an existing member of staff was promoted to a higher position. For some interviewees this internal movement of staff through positions appeared to be a deliberate approach within their workforce planning. Umar (I21) said 'we try and get the sorters to try and get into the quality controlling area and then from the quality controlling area they get into the supervisor role'. Mitul (I13) described a plan to transition an employee into management over time by giving increasing responsibility. Vicki (I22) was recruiting trainees with the specific intention of providing them with on the job training in areas that would develop them into future managers for the business.

Some interviewees indicated a preference for internal recruitment that was linked to a view that understanding the business is critical to role competence. This was described as being 'immersed in the business, so they know how it works' (Tony, I20). According to Tony (I20), the importance of knowing the business is associated with the need to match the entire fruit production process (growth, harvest, picking, sorting, packing) to specific market requirements. This relies on the 'black art' of intuition in a 'highly variable and subjective business' (Tony, I20). Three other interviewees expressed similar views (I13, I21 and I23).

Other reported benefits of internal recruitment included knowing what the person had to offer, including their aptitude and training needs. Additionally, two interviewees stated that there was a decreased risk of someone coming with 'bad habits' when hired and trained internally.

In contrast, some interviewees described experiences of investing resources in training staff only to have the staff member leave. Retention thus influences the capacity of businesses to internally recruit for roles. Several interviewees discussed issues associated with retention and turnover. For example, Juan (I10) stated: 'If they were turning over there must be job dissatisfaction or problems with the boss or not paying enough money, so something's wrong. You're better off hanging on to the people who've got the skills rather than losing them and trying - starting again.' Tony (I20) recognised a problem with retention in their business: 'There's also a fairly high burn out rate I think because it's a highly pressured industry'. This means Tony (I20) was 'always thinking about someone who can fill' a manager role.

Overall, there seemed to be a preference among orchard and integrated business interviewees for building upon the skills of existing staff to enable internal recruitment for increasingly skilled positions. This stemmed from the value that employers placed on existing employees already understanding the business and a reduced risk that the candidate will be a poor fit for the business in the role. The pool of potential candidates for positions could come from the seasonal workers, permanent-casual workers or permanent workers.

### *External recruitment*

Bringing in new staff to fill a business need was an approach used by interviewees. At times these new staff were sourced internationally (especially from New Zealand), from other states or other industries. For example, Vicki (I6) had recently hired a candidate for a manager role from interstate, with experience in a different sector of the horticulture industry. While it was recognised that he would need to be trained in pome fruit production, his management skills were nevertheless seen as valuable.

Interviewees linked their recruiting decisions to current and future business needs. For example, Umar (I21) indicated that recent growth in their business meant that some new roles were being developed which existing staff didn't have the skills to fill. As well, Vicki (I22) identified a need for managers in the future and noted that this business has developed a

succession plan by hiring trainees who are being trained on the job to become assistant managers and, potentially, managers.

Employers described how they recruited staff predominantly through informal and industry networks, as well as by advertising. They reported recruiting externally for entry level positions, such as orchard hands, and where the new position relied on skillsets that were not available and not easy to build within their existing workforce, such as a new quality assurance tracker for export markets.

#### *Recent recruitment experiences and difficulties*

We asked interviewees about jobs that they had sought to recruit to in the previous 12 months and those they envisaged recruiting to over the coming 12 months. Fourteen businesses indicated that they had recruited, or attempted to recruit, or were planning to recruit staff for more than 27 positions. Eleven interviewees indicated that they had experienced difficulties filling roles in their businesses, with some businesses describing multiple positions that were difficult to fill. The list of hard to fill positions included orchard managers and assistant managers, and various other management roles in the packing shed and office

Interviewees linked their recruitment needs to their interest in expanding the business. For example, Fabia (I6) said 'Our single biggest impediment to growth now is people. It's not ideas and it's not access to capital, it's 'who is the next person?' Some interviewees indicated that applicants were difficult to come by, such as when 'no one applied' when Bernie (I2) advertised for an Orchard Manager role. At other times, turnover was implied to be an issue, when interviewees stated that they were always looking for someone to fill a manager role (I20 and I21). Interviewees also found that sometimes people applied but just didn't have enough experience, such as when Oscar (I15) was looking for a Nurseryman.

Some challenges filling roles related to the need for specialist skillsets. Xavier (I24) was struggling to find Specialist Pruners who could train young trees in intensive systems. Samuel (I19) also identified problems finding someone with these skills, though he responded by taking on the job himself. Wyatt (I23) had been trying to find a Dispatch and Logistics specialist for over a year, and was still looking at the time of the interview. This echoed the experience of Fabia (I6) who couldn't fill a logistics role and then tried, unsuccessfully to train someone internally.

Seven of the 11 businesses struggling to fill roles were having difficulties finding Managers (I2, I6, I12, I14, I15, I20, I21). Yet, management skills, especially people management skills were viewed as critical to business success (I6, I13, I17, I22). Mitul (I13) stated that 'it's probably the quickest way to go broke if your staff doesn't have either the right manager or the right people giving instructions'.

Our study confirms the findings of previous industry consultation (Catalyst Exchange, 2015), that middle management positions are difficult to fill, and yet are becoming increasingly important to the success of fruit growing businesses in the Goulburn-Murray region.

## **Discussion**

The findings presented above on (a) workforce structure and job types and (b) employer's approaches to meeting workforce needs give an indication of the career pathways that exist in the Goulburn-Murray fruit industry. These findings also identify more generally the challenge that farms face in meeting workforce needs as family farms get larger, and as employed workers come to replace family members in more senior leadership roles.

We have represented this information diagrammatically in Figures 4 and 5. These diagrams involve a large degree of generalisation. They do not represent the actual situation in any individual business, and they are not an attempt to depict any recommendation on what might be considered desirable or best practice. Rather, they are a communication tool that allows us to represent in a concise format a range of relevant findings from this study, to

enable further discussion and deliberation on what these findings suggest could be done as part of future workforce development work.

In Figure 4, we take the most common job titles identified in the study and group them into two broad levels of jobs. We have termed jobs which involve independent decision-making as managerial jobs ('DECIDERS'), and jobs which are mostly about carrying out instructions given by others as non-managerial jobs ('DOERS'). The 'decider' and 'doer' distinction implies different skillsets. Those in managerial jobs rely on strategic and abstract thinking, risk management, as well as business and workforce planning when they are making decisions. Those in non-managerial jobs rely on concrete knowledge of the tasks being performed, the capacity to identify urgent problems or risks associated with tasks, and ability to communicate and supervise other staff in implementing day-to-day tasks. While we have identified the distinction between these two categories of jobs, this research has not analysed in detail the skillsets needed for each.

As discussed previously, we identified that jobs with the same title can involve quite different duties in different businesses, and so it isn't always clear whether the job of Orchard Manager, for example is a 'doer' or a 'decider'. That is why the middle grey box on the left of Figure 4 has been shown straddling the line between managerial jobs and non-managerial jobs. Based on the findings of this study, it is this middle grey box that contains the 'middle management' positions that have been identified as difficult to fill.

Figure 5 goes on to depict the pathways of entry into jobs, and career pathways within the industry at these two different levels, as they were described to us by the participants in this study, including both the external and internal recruitment pathways. External candidates are sourced from the range of sources shown on the left of the diagram, and there is some differentiation between typical sources of external recruitment for managerial versus non-managerial jobs. Internal recruitment occurs when an employee moves from one job to another within the business. Internal recruitment can occur within one or another of the two broad levels of jobs (for example when a seasonal or casual worker moves into a permanent orchard hand position), but internal recruitment can also involve workers moving from a non-managerial role into a managerial role, as depicted by the dotted diagonal arrow that crosses the dotted line in the centre of Figure 5.

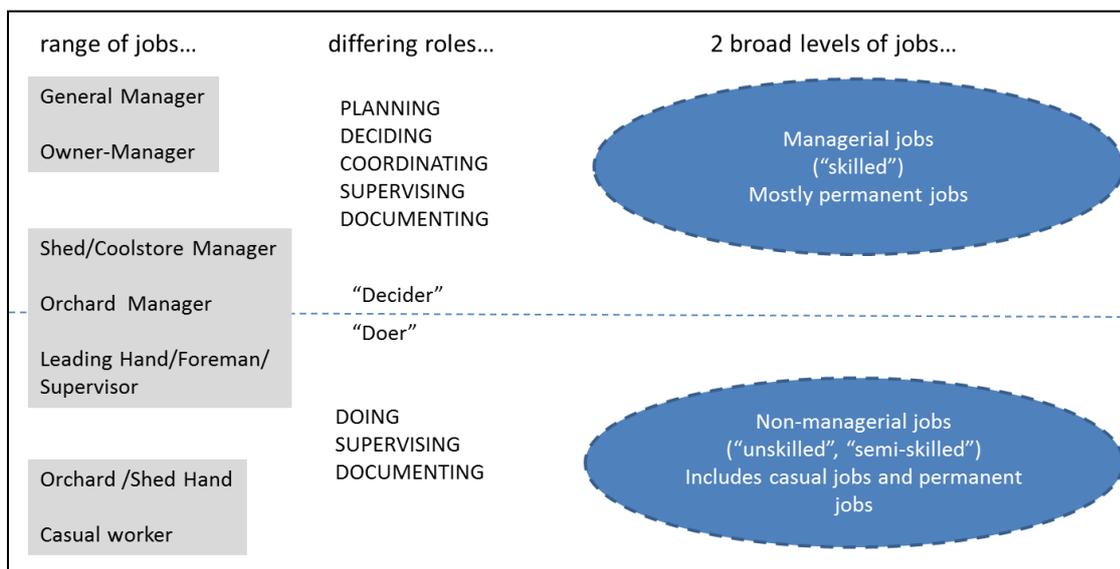
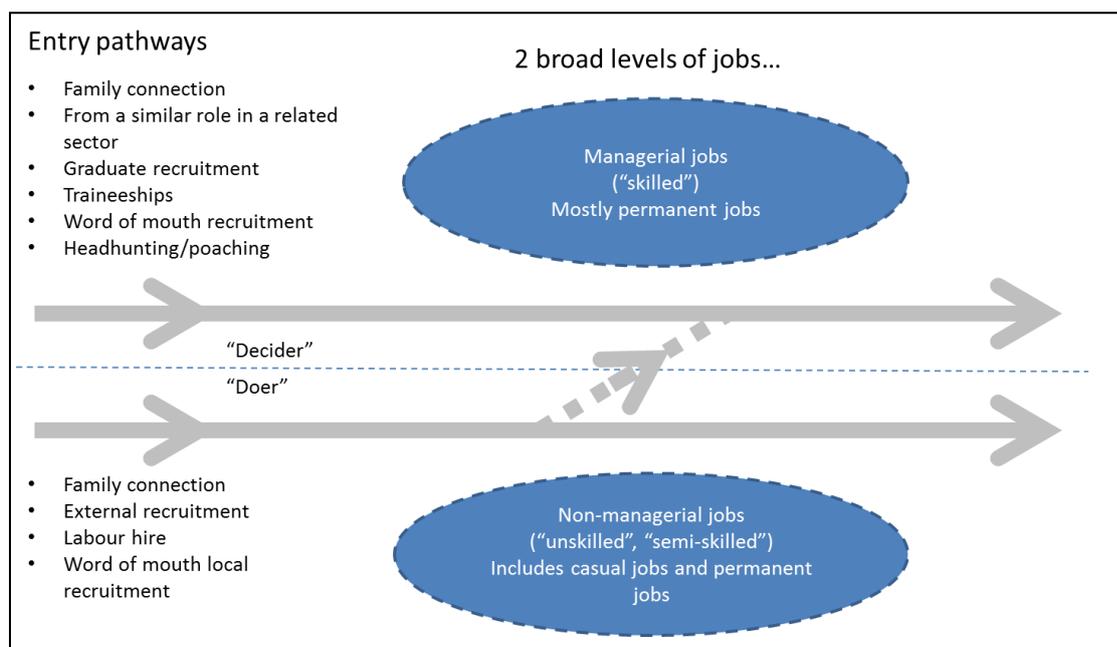


Figure 4. Two broad levels of jobs in the fruit industry workforce.



**Figure 5.** Entry and career pathways for fruit industry workers

This understanding of career paths has several implications for future workforce development for the Goulburn-Murray fruit industry.

1) Many employers prefer the internal recruitment pathway, including the internal recruitment pathway that leads from non-managerial jobs to managerial jobs, partly because of the importance they place on business or orchard-specific knowledge, and partly because they like to hand pick candidates who show aptitude and motivation. Therefore:

- Developing better linkages between businesses and the vocational training sector so that skills development is occurring within a specific business context will address the need of employers for business-specific knowledge and will reveal aptitude and motivation of individuals for career advancement.
- Given the difference in skillsets between 'doers' and 'deciders', it is important for those involved in workforce development, including industry, to (a) understand the new skills that are required when someone moves from a non-managerial into a managerial role and (b) have options available to employers and employees to assist with acquisition of these skills.

2) Despite the common preference from internal recruitment, employers also recruit externally. Larger businesses (particularly those of Type 4 according to our typology) appear to be recruiting externally more often, because of the number of jobs in these businesses. Our findings indicate that employers had difficulties filling some jobs, especially managerial roles, and this difficulty is impeding business development and growth.

3) Effectively maintaining a workforce that meets business needs relies on both internal and external recruitment. This requires employers to consider the workforce needs of the business over the coming years and the retention of existing staff. Therefore:

- Strategic workforce planning and human resource management training may benefit businesses that do not already utilise these skills.
- Research to understand job attractiveness and retention issues from the perspective of employees would be useful to identify steps that businesses can take to improve attractiveness and minimise turnover.
- Given the potential for changes to the skills and career paths needed by the industry, those involved in workforce development will benefit from regular environmental scanning of changes that may influence skill needs (e.g. technology, changes to supply chain

structure, policy and regulation). This information can be provided to businesses to inform their strategic workforce planning and will enable effective recruitment.

- The model in Figures 4 and 5 representing jobs and career paths in the Goulburn-Murray fruit industry can be used to think about the range of possible skills acquisition pathways that are available to meet industry needs, including:
  - What jobs in the fruit industry are suitable for university graduates, and what skills would the industry like these graduates to have?
  - How do the skills required of the various jobs match up to the competencies included in different levels of vocational and University qualifications? Are there any important competencies that need to be covered that currently aren't included in these qualifications?
  - What is the best mode for delivery of vocational training, given employers' preference for on-the job learning and orchard-specific knowledge? (But noting also that employees' preferences may differ from those of employers.)
  - What is the role for industry-specific management traineeships and graduate programs?

## Conclusions

The availability of suitably skilled staff to fill management roles has been identified previously as a serious constraint to the future development of businesses in the Goulburn-Murray fruit industry. This study begins the process of understanding this problem, and how it might be tackled, from a systemic workforce development perspective. Making more middle managers for the Goulburn-Murray fruit industry will require interventions in both the internal and external career pathways. While there is some scope for this to be done at the scale of individual businesses, there are also several interventions that can be tackled at regional industry scale, including:

- Targeted linkage development with the training sector to ensure that training scope and delivery meet industry needs,
- Developing a collective understanding of common jobs and associated position descriptions, to develop shared understanding of expectations by employers within the region and industry.
- Establishing a regional industry approach to enhance the visibility and availability of career paths in managerial roles.
- Industry-directed environmental scanning and research to identify changes that may affect the industry workforce and workforce development now and into the future

This study revealed several gaps in the knowledge needed to progress workforce development efforts:

- Research to understand fruit industry jobs and careers from the perspective of employees. What makes fruit industry jobs attractive or unattractive? How do employees experience the human resource management practices of employers? What is the perspective of employees on career paths in the industry?
- Research on employers' current human resource management policies and practices, to assess any skills gaps and/or practices that could be improved;
- Research to identify the barriers to moving from non-managerial to managerial career pathways.

This study adds to prior work on workforce development for agriculture in highlighting that the ability of industry sectors and regions to meet their workforce needs depends on more than training and skills development. It requires an understanding of how work organisation on

farms is changing, as farming systems adapt in response to their changing context. A growing need for employees with managerial skills is one such change, and this change in turn suggests a need to understand the farm management career pathways that are available, or may need to be created. This study highlights too that workforce development is a task which cannot be tackled at farm scale alone. Rather, it requires regional and/or sectoral collaboration.

## References

- AgriFood Skills Australia. (2015). *Environmental Scan of the Agrifood Industry 2015: What lies beneath*. Kingston: AgriFood Skills Australia.
- Alston, M. (2004). Who is down on the farm? Social aspects of Australian agriculture in the 21st century. *Agriculture and Human Values*, 21(1), 37-46.
- Bazeley, P. (2009). Analysing qualitative data: more than 'identifying themes'. *Malaysian Journal of Qualitative Research*, 2(2), 6-22.
- Bitsch, V. (2009). *Personnel Management Research in Agribusiness*. Paper presented at the 19th Annual World Forum and Symposium of the International Food and Agribusiness Management Association, Budapest, Hungary. [https://ifama.org/resources/files/2009-Symposium/1067\\_paper.pdf](https://ifama.org/resources/files/2009-Symposium/1067_paper.pdf)
- Bitsch, V., & Yakura, E. K. (2007). Middle management in Agriculture: roles, functions, and practices. *International Food and Agribusiness Management Review*, 10(2), 1-28.
- Calus, M., & Van Huylenbroeck, G. (2010). The Persistence of Family Farming: A Review of Explanatory Socio-economic and Historical Factors. *Journal of Comparative Family Studies*, 41(5), 639-660.
- Catalyst Exchange. (2015). *Food Futures: Goulburn Valley Cluster Process and Tools*: Unpublished report.
- Chiswell, H. M. (2016). From generation to generation: Changing dimensions of intergenerational farm transfer. *Sociologia Ruralis*, n/a-n/a. doi:10.1111/soru.12138
- Cowan, L., Wright, V., Kaine, G., & Cooksey, R. (2015). The influence of family and personal domains on change decisions on irrigated dairy farms. *Rural Extension and Innovation Systems Journal*, 11(1), 11.
- Delbridge, R., & Lowe, J. (1997). Manufacturing control: supervisory systems on the 'new' shopfloor. *Sociology*, 31(3), 409-426.
- Findeis, J. L. (2002). Hired farm labour adjustments and constraints. In A. Vandeman, J. Larson, & J. Runyan (Eds.), *The Dynamics of Hired Farm Labour: Constraints and Community Responses* (pp. 3-14): CABI.
- Fischer, H., & Burton, R. J. F. (2014). Understanding Farm Succession as Socially Constructed Endogenous Cycles. *Sociologia Ruralis*, 54(4), 417-438. doi:10.1111/soru.12055
- Gasson, R., & Errington, A. J. (1993). *The farm family business*. Wallingford: CAB International.
- Growcom Australia. (2013). *2013 - 2015 Queensland Production Horticulture Workforce Development plan*. Brisbane: Growcom Australia and the Queensland Government.
- Hoppe, R. A., & MacDonald, J. M. (2016). *America's Diverse Family Farms: 2016 Edition*. Washington, DC: United States Department of Agriculture.
- Lobley, M., Baker, J. R., & Whitehead, I. (Eds.). (2012). *Keeping it in the family : international perspectives on succession and retirement on family farms*. Farnham, England: Ashgate.

- Lowder, S. K., Skoet, J., & Raney, T. (2016). The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide. *World Development*, 87, 16-29. doi:<http://dx.doi.org/10.1016/j.worlddev.2015.10.041>
- Nalson, J. S. (1964). Problems of resource use on the family farm. *Australian Journal of Agricultural Economics*, 8(1), 46-56. doi:doi:10.1111/j.1467-8489.1964.tb00350.x
- Nettle, R. (2015a). *Innovative work: Cotton workforce development for sustained competitive advantage, final report to the Cotton Research & Development Corporation*. Melbourne: University of Melbourne, Rural Innovation Research Group.
- Nettle, R. (2015b). More than Workforce Shortages: How Farm Human Resources Management Strategies Will Shape Australia's Farming Future. *Farm Policy Journal*, 12(2), 17-27.
- Nettle, R., & Oliver, D. (2009). *Workforce planning and action for the Australian dairy industry. The People in Dairy: People Capability for the farm sector (Stage 1, Modules 1 to 3)*. Melbourne: Rural Innovation Research Group, Melbourne School of Land and Environment, University of Melbourne.
- Nettle, R., Oliver, D., Brightling, P., Buchanan, J., & Williamson, J. (2008). From 'Workforce Planning' to 'Collective Action': Developments in the Australian Dairy Farm Sector. *Employment Relations Record*, 8(1), 17-33.
- Nettle, R., Semmelroth, A., Ford, R., Zheng, C., & Ullah, A. (2011). *Retention of people in dairyfarming – what is working and why?: Final Research Report*. Melbourne: Gardiner Foundation.
- Perry, C. S. (1982). The rationalization of US farm labor: trends between 1956 and 1979. *Rural Sociology*, 47(4), 670.
- QSR International. (2013). In *NVivo 10 for Windows*. Doncaster, Vic.: QSR International.
- RMCG & GVFGSWG. (2013). *Goulburn Valley Fruit Growing Industry Roadmap - Final*: RMCG in conjunction with the Goulburn Valley Fruit Growers Strategic Stakeholder Group.
- Santhanam-Martin, M., & Cowan, L. (2017). *Understanding Skilled Workforce Issues in the Goulburn Valley Fruit Industry*. Melbourne: University of Melbourne and Agriculture Victoria.
- Seymour, E., & Barr, N. (2014). *Farmer preferences for formal learning: A review of current data and literature*. Melbourne, VIC: Rural and Resources Policy, Department of Environment and Primary Industries.
- TFGA. (2015). *Tasmanian Primary Industries Workforce Development Scan 2015-16*. Hobart: Tasmanian Farmers and Graziers Association.