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Agrifood systems transformation through circular migration between Pacific island countries and Australia



100

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Agrifood systems transformation through circular migration between Pacific island countries and Australia

Federico Davila, Olivia Dun, Carol Farbotko, Brent Jacobs,
Natascha Klocker, Ema Vueti, Lavinia Kaumaitotoya, Angela Birch,
Peter Kaoh, Tikai Pitakia and Sinaitakala Tu'itahi



2022

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Foreword

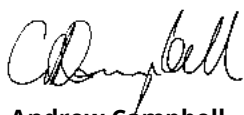
The lives and livelihoods of diverse communities worldwide have been disrupted by the global health and economic crisis resulting from the COVID-19 pandemic. Among Australia's neighbours in Pacific island countries, the pandemic has precipitated a sudden and protracted decrease in external sources of income, such as tourism. The loss of external income has further amplified the social and economic challenges in a region fighting a rapidly changing climate and deteriorating food security.

The Australian Centre for International Agricultural Research (ACIAR) was mandated, as set out in the *Australian Centre for International Agricultural Research Act 1982*, to work with partners across the Indo-Pacific region to generate the knowledge and technologies that underpin improvements in agricultural productivity, sustainability and food system resilience. We do this by funding, brokering and managing research partnerships for the benefit of partner countries and Australia.

Along with many of our partners, ACIAR faces important decisions about how to best support recovery from the impacts of the COVID-19 pandemic. In May 2020, ACIAR initiated a program of assessments to identify the impacts of the pandemic on food systems across the Indo-Pacific region. Significant among these was an assessment that highlighted the role that Australia's economic relationship with Pacific island countries could play in the process of recovery.

ACIAR commissioned a study in 2021 to identify the barriers to and enablers of agricultural knowledge and skills exchange between Pacific island and Australian farmers who participate in the Australian Seasonal Worker Programme. Shortly after the study was delivered, the Australian Government announced that the program would be amalgamated into a new labour mobility scheme. The findings of this report, about opportunities for agricultural knowledge exchange through temporary international labour mobility, are just as relevant for the emerging arrangements. While participation in labour mobility programs enables workers to acquire significant earnings, it also addresses critical labour shortages on Australian farms. Such programs enable the invaluable exchange of knowledge and skills that could play a catalytic role in rural development, food security and livelihoods in Pacific island countries.

Australia's economic relationship with Pacific island countries will become increasingly important as we all face the headwinds of unprecedented social, economic and environmental change. The potential for knowledge and skills exchange to support both Australia and the Pacific island countries as we face these challenges is a fantastic proposition. As a knowledge-brokering and capacity-building organisation, ACIAR is ready to embrace this potential and continue our work in translating rigorous science into practical knowledge for developing smallholder systems. This timely report will help us in our mission, and hopefully will be of interest to our many partners across the region.



Andrew Campbell

Chief Executive Officer, ACIAR

Authors

Federico Davila

Institute for Sustainable Futures,
University of Technology Sydney

Olivia Dun

Australian Centre for Culture,
Environment, Society and Space (ACCESS),
University of Wollongong

Carol Farbotko

CSIRO Land and Water

Brent Jacobs

Institute for Sustainable Futures,
University of Technology Sydney

Natascha Klocker

Australian Centre for Culture,
Environment, Society and Space (ACCESS),
University of Wollongong

Emu Vueti

Pacific Islands Council of Queensland

Lavinia Kaumaitotoya

Pacific Island Farmers Organisation Network

Angela Birch

Pacific Island Farmers Organisation Network

Peter Kaoh

Farm Support Association, Vanuatu

Tikai Pitakia

Kastom Gaden Association, Solomon Islands

Sinaitakala Tu'itahi

Grower's Federation of Tonga

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ACIAR

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Also established under the ACIAR Act are 2 advisory groups. The Commission for International Agricultural Research provides decision-making and expert strategic advice to the Minister for Foreign Affairs on the operations of ACIAR. The Policy Advisory Council reports to the Minister for Foreign Affairs, the Commission for International Agricultural Research and ACIAR on issues, programs and policies affecting agriculture in developing countries.

This technical report presents the findings of an ACIAR-funded study, 'Agri-food systems transformation through circular migration between Pacific island countries and Australia' (CS/2020/212).

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This work was made possible by the time, generosity and insights provided by the seasonal workers and employers we spoke to. We thank them for welcoming us to their homes, properties and gardens, and sharing their thoughts, experiences, photos and food with us.

Acronyms and abbreviations

DESE	Department of Education, Skills and Employment
DFAT	Department of Foreign Affairs and Trade
MFAET	Ministry of Foreign Affairs and External Trade (Solomon Islands)
SPC	Pacific Community
PIFON	Pacific Island Farmers Organisation Network
PICQ	Pacific Islands Council of Queensland
PLS	Pacific Labour Scheme
RSE	Recognised Seasonal Employer scheme (New Zealand)
SWP	Seasonal Worker Programme



Executive summary



Photo: Conor Ashleigh

Executive summary

In Pacific island countries, agriculture makes important contributions to national gross domestic product and everyday livelihoods. The COVID-19 pandemic has impacted the economies and food security of Pacific island countries. In Australia, the agriculture sector has not been immune to COVID-19 shocks. While international food demand has continued, Australian farms have faced a shortage of labour due to border closures and travel restrictions. Continued, albeit reduced, international labour mobility between Pacific island countries and Australia via the Seasonal Worker Programme (SWP) is helping address Australian agricultural labour shortages and the socioeconomic impacts of COVID-19 in Pacific island countries.

This report focuses on agricultural knowledge exchange enabled by the movement of workers between Pacific island countries and Australia under the SWP. It helps us understand how international labour mobility can support future agricultural systems in the region. In April 2022, the SWP will be amalgamated with the Pacific Labour Scheme to form the Pacific Australia Labour Mobility (PALM) scheme. However, the findings of this report remain relevant to the overall topic of international labour mobility in Australia.

Pacific labour mobility is a major component of the Australian Government's Pacific Step-up initiative. The SWP enables Australian employers (for example, agricultural enterprises, farmers and accommodation providers) to host citizens from Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu, as well as Timor-Leste, for temporary work stays in Australia. The SWP offers opportunities

for circular migration, as workers can choose to participate in the SWP multiple times, enabling workers to travel between their home countries and Australia several times. Around 60% of SWP participants work in Australia at least twice, and 70–80% of those who spend a second season go on to participate multiple times. Repeat participation in the SWP provides scope for workers to acquire significant earnings over multiple years and also means that return workers accumulate skills. This circular migration is also positive from the perspective of Australian employers, who benefit from not having to train new workers each year. While the SWP is not exclusively about working in the agriculture sector, the vast majority of SWP workers are engaged in agricultural work in Australia.

Knowledge gap

A knowledge gap exists in Pacific labour mobility studies. Much has been written about the economic development benefits and governance dimensions of labour mobility. However, there is limited information about, or evidence of the experiences of, SWP workers and employers regarding the agricultural knowledge and skills exchange enabled by the SWP. It is valuable to identify the extent to which Pacific islands workers develop agricultural knowledge and new agricultural skills through their engagement on farms in Australia and their home countries through their participation in the SWP and other similar Pacific labour mobility programs.

Research aim and approach

This report presents findings from a qualitative study carried out concurrently in Australia, Solomon Islands, Tonga and Vanuatu between February and June 2021. This study aimed to identify the barriers to and enablers of agricultural knowledge and skills exchange between Pacific island and Australian farmers who participate in Australia's SWP. We report on how Pacific islands SWP workers exchange agricultural knowledge with their Australian employers and take knowledge and skills back to support rural development, food security and livelihoods in their home countries. This study considers how Pacific labour mobility creates a unique opportunity for SWP workers to combine their pre-existing agricultural knowledge, including customary knowledge, with new expertise obtained while working in Australia, and how this has transformative potential and benefits for workers' farms and communities in Pacific island countries.

The data informing this study draws on semi-structured interviews with 4 Australian SWP employers and 63 current and former SWP workers (many of whom are also farmers in their home countries) conducted between May and June 2021. The interviews were conducted by a team of Australian researchers and members of the Pacific Island Farmers Organisation Network (PIFON) and the Pacific Islands Council of Queensland (PICQ). Interviews were conducted in person in Australia (south-east and north Queensland), and in selected provinces and regions of Solomon Islands, Tonga and Vanuatu.

Research results

This study reveals there are a range of agricultural knowledge and food value chain skills acquired and applied by SWP workers, both in Australia and on their return to Pacific island countries, through their participation in the SWP. Some workers interpreted their observations of Australian farms as adaptable to their own farming practices in Pacific island countries, while others did not. Some workers identified the relevance of these practices to their Pacific islands farming contexts, but did not have access to the required agricultural extension support in their home countries to enable them to apply their new knowledge. The vast majority of SWP workers expressed a strong appetite for learning more agricultural knowledge and skills through their participation in the SWP.

Knowledge and skills exchange through the SWP

We found that 46% of SWP workers interviewed had applied knowledge or skills they learned in Australia in their home countries. Much of this agricultural knowledge and skills acquisition was unplanned and incidental, occurring through workers' everyday interactions and relationships with Australian employers and other workers, and practical on-farm experience. Incidental knowledge transfer also occurs when workers return to the Pacific island countries and exchange experiences and ideas with their families and broader local communities. Importantly, while Australian and Pacific island countries farm systems commonly differ in scale of production, the principles of crop maintenance and protection, striving for produce quality, encountering market barriers and crop diversification were relevant to SWP workers.

Cropping techniques related to planting and pruning learned on Australian farms were the most relevant to SWP workers. Pruning and desuckering are directly transferable to workers' home country contexts and can be used for a range of Pacific agricultural systems and crops. Transferring these skills from Australia to Pacific island countries does not depend on the existence of the same crops in both locations.

Soil and water management in large-scale Australian systems demonstrates to Pacific islands workers the importance of managing these resources for agricultural productivity. Some workers reported learning about basic irrigation systems in Australia and testing them on their own farms when they returned home. However, there are limits to transferral of technical knowledge that requires high-capital technologies, such as irrigation or pumping systems. Workers are often not directly involved in marketing produce as part of their SWP experience, limiting their capacity to learn about marketing, despite this study revealing their interest to do so. This limits the ability for them to learn about business and value chain opportunities that they could expand on in their own countries.

Barriers to knowledge and skills exchange

Barriers to agricultural knowledge and skills exchange through the SWP related to perceptions by both SWP workers and employers about the lack of relevance of Pacific islands farming experience to Australian agriculture challenges, dismissal of SWP workers' knowledge, lack of opportunities to share knowledge between workers, limited financial incentives and institutions to support agricultural change in Pacific island countries, and limited

exposure of SWP workers to all parts of the food value chain in Australia. We found that only 25% of SWP workers mentioned actively sharing their farming experience with their Australian farm employers. In some cases, the scale of the Australian agribusinesses simply meant that there was limited opportunity for workers to meet with their Australian farm owners. SWP workers also expressed a tendency to dismiss their own – often considerable – agricultural knowledge entirely or believe that their agricultural expertise was of limited value to Australian employers. Only working on one part of the farm or farm system, or with one crop, during their SWP tenure in Australia prevented workers from developing a holistic perspective of the full farm system, such as exposure to marketing or product quality testing.

More pressing priorities of some workers (such as supporting family expenses and household infrastructure) influenced the extent to which they used their SWP earnings to reinvest in agriculture. Other SWP workers, while interested in maintaining agriculture in their home countries, do not have people to look after their land while they participate in the SWP. Some governance aspects of the SWP, such as expenses taken out of their pay and inability to access their superannuation, act as a further barrier to reinvesting in agriculture in Pacific island countries.

Employers' insights suggested that barriers exist to agricultural knowledge and skills exchange. First, the scale of Australian commercial farm production and the technology involved is often too different for SWP workers' pre-existing knowledge to be applicable or for translation of knowledge from Australia to Pacific islands farming contexts. Second, there is an absence of support and interventions to enable knowledge to be translated across

the different farming contexts. There are also increasing administrative and regulatory burdens of the SWP that lead to the risk of diminishing opportunities for workers to be employed on small-scale Australian farms, where they could form direct professional relationships with Australian farmers and more rapidly acquire diverse agricultural knowledge.

Opportunities for additional knowledge exchange

This study also asked SWP workers about the agricultural knowledge and skills they were keen to learn. Approximately 70% identified Australian farming practices that they find interesting, and two-thirds identified a concrete way in which the SWP could help them develop their farming knowledge and skills. The specific skills or farm practices they were interested in learning ranged from specific skills in crop growing (for example, soil preparation and management, water management, weed management, use and application of synthetic chemicals and plant hormones, plant grafting techniques, harvesting techniques, greenhouse production, nursery production and operating farm machinery) to processing and marketing aspects of the farm business (for example, produce selection, packaging techniques and market access).

SWP workers discussed how skill development can be embedded through the different phases of SWP participation (recruitment, pre-departure, in-Australia employment, return to Pacific island countries). Their suggestions for who should or could provide the relevant suggested support included government ministries, Australian employers, agricultural training

organisations, farmer organisation networks and private companies.

SWP employers also emphasised the importance of recognising the learning that workers acquire, and their experience and goals, through the SWP. Agribusiness development and training embedded in existing rural training or knowledge programs in Pacific island countries were also posed as an opportunity for embedding knowledge exchange before and after SWP participation.

Recommendations

Multiple policy and development contexts influence the benefits of labour mobility. The combination of continued labour demands in Australian agriculture, COVID-19 socioeconomic impacts in the Pacific, future food systems risks in Pacific island countries, the Australian Government's Pacific Step-up, and parallel labour mobility programs set the context for 2 major recommendations arising from this research.

Recommendation 1: Enable greater agriculture-oriented research and training within the SWP and broader agriculture-related labour mobility

Multiple Australian and state government agencies play a role in international labour mobility – from administering the program and monitoring compliance to working with labour-sending countries. These agencies have an opportunity to effectively embed specific agricultural knowledge, skills training and research activities into the SWP across all phases of the program (recruitment, pre-departure, in-Australia employment, return to Pacific island countries). Facilitating the broader translation of farming skills gained in

Australia into Pacific islands farming system contexts will require international development agencies to facilitate in-country understanding of what would work for returning workers, and how an enabling environment for long-term adoption of the agricultural skills could be established.

For researchers, there is a tremendous window of opportunity for expanding socioeconomic and governance analysis of Pacific islands labour mobility by integrating greater understanding of agriculture and food systems resilience into such studies, given the crucial role agriculture plays in Pacific islands livelihoods. Possible research opportunities include:

- co-designing agricultural research activities with Pacific island-based community organisations and farmer networks
- partnering with SWP employers to embed relevant agricultural training within their specific farming system
- understanding food growing and consumption habits of SWP workers and their families arising from changes in incomes generated by SWP participation
- understanding the gender differentiation of agricultural knowledge adoption and application enabled by SWP participation
- expanding opportunities for Pacific islands' youth participating in the SWP to be part of the agricultural transfer and knowledge diffusion system.

While the recommendations and research suggestions made here are highlighted with respect to the SWP, they are also applicable to other agriculture-related international labour mobility programs to Australia.

Recommendation 2: Recognise the SWP as a pathway to ongoing COVID-19 socioeconomic recovery

The SWP, despite its challenges, continues to be an important contributor to socioeconomic development for Pacific island countries and has continued to operate despite international border closures due to the COVID-19 pandemic. This international labour mobility program is an important contribution by Australia to continue to support development in participating Pacific island countries. The circular migration aspect of the SWP has allowed some workers and employers to build trusting relationships with each other. In the cases illustrated in this report, it has enabled learning and sharing opportunities between workers and employers. This exploratory study has provided the analysis and evidence base to assist different actors in the Pacific islands labour mobility system to embed more explicit agrifood systems knowledge development into labour mobility between Australia and Pacific island countries to better support Pacific islands agriculture in the future.

The SWP is a potential leverage point for supporting Pacific island countries and Australian agricultural futures, especially as the SWP is central to a nexus of relevant development policies in Australia and the Pacific islands region. A combination of enabling environments, such as existing training programs and farmer networks, a large agriculture labour gap, and international development imperatives such as the Pacific Step-up, position the SWP (and broader labour mobility) to function as a COVID-19 recovery program. Different actors in the Pacific islands labour mobility process can augment opportunities for workers to share their knowledge and expand their skill sets to support future farming activities in their Pacific island countries.

1 Introduction



Photo: Conor Ashleigh

1 Introduction

In Pacific island countries, agriculture makes important contributions to national gross domestic product and everyday livelihoods. These contributions from agriculture are varied – Melanesian countries are relatively ‘food secure’ with fresh produce widely available and affordable, while the more isolated regions of Micronesian and Polynesian countries have increasingly become more heavily dependent on imported foods and have growing nutritional challenges (McGregor et al. 2009; Connell 2015). Since the 1980s, Pacific island countries have experienced substantial declines in domestic fresh vegetable production, paralleled by increased consumption of low-nutrient and high-calorie food (Farrell et al. 2020).

Agriculture in Pacific island countries is under increasing pressure from the combination of socioeconomic drivers (such as poverty and inequality) and environmental threats (such as biosecurity risks and sea-level rise) (Campbell 2020). Increasing poverty in the region influences food consumption habits, with cheaper, low-nutrient, imported foods becoming more accessible to low-income families (Plahe et al. 2013; Charlton et al. 2016). Among rural families, household expenditure is largely directed towards supplementing self-grown food, as traditional subsistence agriculture is increasingly insufficient to meet the demands of a growing population (Sievert et al. 2019; Savage et al. 2020). In addition to this socioeconomic

context, Pacific island countries are among the world’s most vulnerable to the effects of climate change, such as uncertainty in severe weather events and saltwater intrusion of freshwater lenses in atoll islands (Dixon-Jain et al. 2014). Biosecurity risks to food production are high, with low biological and genetic diversity coupled with increasing pest outbreaks, such as taro leaf blight (Alexandra et al. 2020) and the coconut rhinoceros beetle.

Amplifying these risks, the COVID-19 pandemic has impacted the economies and food security of Pacific island countries. Recent analyses have shown that, even though net-food importing countries in the region have been able to withstand the immediate economic shocks of the COVID-19 pandemic (Steenbergen et al. 2020; Wairiu et al. 2020; Davila et al. 2021), some communities have been reliant on savings and resource stocks that existed before the pandemic. With no expansion of tourism or agricultural markets since the beginning of the COVID-19 pandemic, rural communities continue to face a number of socioeconomic challenges. There is also a continued risk of new variants of the COVID-19 virus emerging, and the recent escalation of daily infections and deaths in Fiji (Movono et al. 2021) has emphasised the high vulnerability of small island nations to the virus.

Coupled with the socioeconomic and health risks of COVID-19, accelerating global climate change is impacting the livelihoods and health of Pacific island countries (Tukuitonga and Vivili 2021). With scenarios from the IPCC indicating that a 1.5 °C increase is a certainty, land systems are heavily affected, and oceans are increasingly warming, Pacific island countries require rapid strategies to sustain the livelihoods and futures of their communities (IPCC 2019, 2021).

International labour mobility provides one avenue for supporting incomes and food security in a region with increasing poverty. International labour mobility 'comprises all movements of natural persons from one country to another for employment or supply of services' (UNECE 2018), with those moving commonly referred to as migrant workers. The development benefits of international labour mobility are well recognised, with migrant workers globally contributing remittances and skills to their countries of origin and contributing to economic growth in destination countries (de Haas 2010; Hugo 2012). International migrant workers include both those who are residents and those who are non-residents in a foreign country (UNECE 2018). The latter are temporary labour migrants who commonly return to their country of origin after a period working overseas (return migrants), some of whom may also repeatedly move back and forth between their country of origin and destination (circular migration), especially if engaged in employment of a seasonal nature in their destination country.

A range of research shows the multiple contributions of return migrants to their countries of origin. Research by the OECD, for example, indicates that individual migrants who return to their origin countries can increase their spending on education for children and reduce the need for child labour (ILO et al. 2015). Return migrants can also help facilitate trade and investment flows between their origin and destination countries and create new demand for goods and services. While potential 'brain drain' can affect migrants' origin countries, if the circulation of skills is facilitated by cooperation between origin and destination countries, both countries can benefit (ILO et al. 2015). Although these potential benefits of labour mobility for origin countries, beyond financial remittances, are well recognised, there remains significant work to be done to realise these benefits, both through more research and policy evaluation and reform (Connell 2015).

1.1 International labour mobility and the Pacific

Over the last 15 years, citizens of 9 Pacific island countries¹ have increasingly had opportunities to work in Australia and New Zealand through 3 government-managed temporary labour mobility programs:

- New Zealand's Recognised Seasonal Employer (RSE) scheme
- Australia's Seasonal Worker Programme (SWP)
- Australia's Pacific Labour Scheme (PLS).

The programs listed above primarily involve Pacific islands migrant workers filling seasonal labour shortages in the agriculture sectors of Australia and New Zealand, with participants commonly referred to as 'seasonal workers'. Participant numbers in these Pacific islands labour mobility programs have continually increased and are projected to grow further (Lawton 2019). International border closures brought about by the COVID-19 pandemic temporarily reduced participant numbers, however the 3 labour mobility programs have not ceased operating, and labour migrants continue to arrive in Australia and New Zealand (Petrou et al. in press).

At the time of writing this report, 2 major policy shifts with respect to temporary migration to Australia for agricultural work were taking place. First, in August 2021, the Australian Government announced that a new Australian Agriculture visa targeted to workers from a range of countries, especially in South-East Asia, is being developed to fill labour gaps in agriculture, forestry and fisheries (ABC 2021; Commonwealth of Australia 2021a). This new visa is expected to have different regulatory conditions to the visas allowing Pacific workers to come under the SWP and PLS.

The second major policy shift, announced in November 2021, was the amalgamation of the SWP and PLS into the Pacific Australia Labour Mobility (PALM) scheme, scheduled to take place in April 2022 (Commonwealth of Australia 2021b). The new scheme streamlines the 2 programs which are currently administered by different government agencies. The new PALM scheme will retain the core SWP and PLS focus of filling labour gaps in Australian industries with Pacific workers.

The 'competition' and trade-offs of having 2 agriculture-focused temporary labour mobility options to Australia was beyond the scope of this ACIAR research project. This project was designed and implemented with a focus on the SWP as a program that enabled circular migration, before the PALM scheme was announced. While the SWP will be streamlined into the PALM scheme in April 2022, the findings of this report about opportunities for agricultural knowledge exchange through temporary international labour mobility are just as relevant for the emerging scheme, as well the new Australian Agriculture visa.

The changing context of international temporary labour mobility continues to be part of the Australian Government's Pacific Step-up initiative (DFAT 2021a). At the intersection of Pacific labour mobility, agricultural production and food security initiatives, there is an as-yet largely under-explored (Dun and Klocker 2017) opportunity to understand how workers involved in circular migration via labour mobility programs between Australia and Pacific island countries participate in agricultural knowledge flows.

1 Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

Workers from selected Pacific island countries who participate in labour mobility programs already understand their own household food production systems and are exposed to different production practices, climatic conditions and business models when in Australia.

Studies have found that Pacific islands migrant workers learn various skills through participating in Australia's SWP, ranging from farming technologies, production and processing techniques to working with different crop varieties (Dun et al. 2018, 2020), and that repeat participation helps workers to see the benefits of adopting different agricultural practices over time (Dun et al. submitted). There is a need, however, for broader-scale investigation into how these workers develop new agricultural knowledge and innovative agricultural skills through their engagement on Australian farms and in their home countries through their participation in Pacific labour mobility programs, especially those that more readily facilitate circular migration, such as the SWP.

There have also been extensive studies into Australia's economic and development opportunities enabled and offered by the SWP (World Bank 2017, 2018; Zhao et al. 2018). However, only limited studies have looked beyond an economic framing of labour to explore how SWP workers' skills and capabilities contribute to Australia's broader agricultural output (Connell and Petrou 2019). There has also been very limited investigation into if and how SWP employers offer opportunities for workers to learn about Australia's agricultural production system (Connell and Petrou 2019).

1.2 Overview of the study

This exploratory study responds to these research gaps. It investigates how Pacific islands SWP workers exchange agricultural knowledge with their Australian employers and take knowledge and skills back to support rural development, food security and livelihoods in their home countries. The study focuses on Australia, Solomon Islands, Tonga and Vanuatu, and was undertaken in close partnership throughout the full research process with 2 Pacific community-based partner organisations: the Pacific Island Farmers Organisation Network (PIFON) and Pacific Islands Council of Queensland (PICQ). Our study considers how labour mobility creates a unique opportunity for SWP workers to combine their pre-existing agricultural knowledge, including traditional knowledge, with new expertise obtained while working in Australia, with transformative potential and benefits for workers' farms and communities in Pacific island countries (Dun et al. 2018; Farbotko et al. 2018; Dun et al. 2020).

Solomon Islands, Tonga and Vanuatu have a majority of their populations living in rural areas and engaged in small-scale agriculture. International migration, both long term and circular, with associated remittances, has long been the most important contribution to Tonga's economy. In contrast, Vanuatu and Solomon Islands have recently engaged with Australia and New Zealand's labour mobility program and, as such, remittances are playing an increasingly important role in their respective economies (World Bank 2018).

The COVID-19 pandemic has reduced the number of tourists in all 3 countries, most acutely in Tonga and Vanuatu, and increased unemployment and internal migration from urban to rural areas (Steenbergen et al. 2020; Davila et al. 2021).

Pacific labour mobility programs, such as the SWP, are increasingly important for economic recovery and, as this study shows, they offer unique agricultural development opportunities. As COVID-19 continues to impact Pacific economies, labour mobility policies can be shaped to become an important driver of recovery for the region. In a pre-pandemic analysis, Curtain et al. (2016) found that generating an additional 75,000 to 150,000 migrant job opportunities would generate between US\$6.5 billion and US\$13 billion of net income for the people of the Pacific by 2040. While these future estimates may change in a COVID-19 world, the conflation of the significant demand in agriculture (and fisheries) industries in receiving countries and the desire to gain higher incomes in sending countries make labour mobility an important aspect of COVID-19 recovery.

The study presented in this report aimed to understand the opportunities and challenges for the exchange of agricultural knowledge and skills between Pacific islands and Australian farmers as part of the SWP. This study was conducted between February and June 2021, as the health and socioeconomic impacts and travel restrictions associated with the COVID-19 pandemic continued to affect Pacific island countries and Australia. The study used a qualitative approach focused on in-depth interviews, surveys and focus group discussions with employers and workers who are currently, or have previously, participated in the SWP. Despite the travel restrictions, the study was designed and managed to ensure data was collected in person by different groups capable of connecting and building rapport with the seasonal workers.

The study aimed to identify:

- what types of agricultural knowledge and skills are already being transferred by SWP workers, and with what effect
- opportunities to improve the transfer of agricultural knowledge and skills as part of the SWP.

Chapter 2 of this report provides a desktop contextual analysis of labour mobility and agriculture in Pacific island countries and Australia, and summarises the country contexts of labour mobility for Tonga, Solomon Islands and Vanuatu. Chapter 3 presents the methodology and research process.

Results are presented over 3 chapters to capture 3 major sets of findings: the overall agricultural knowledge and skills gained and applied (Chapter 4), the barriers to agricultural knowledge and skills exchange (Chapter 5), and the opportunities for agricultural knowledge and skills exchange (Chapter 6).

In Chapter 7, we synthesise the findings within the context of the wider development priorities of the Australian Government's Pacific Step-up and provide a series of recommendations for research, policy and governance of labour mobility as a contributing strategy to COVID-19 recovery in Pacific island countries.

2 Pacific labour mobility and agrifood systems



2

Pacific labour mobility and agrifood systems

2.1 Australia's Seasonal Worker Programme

Australia's position as a large-scale food producer and net-food exporter depends on the labour provided by foreign workers and immigrants (Collins et al. 2016). To maintain the high-output systems on Australian farms, which are driven by domestic and international market demand, the Australian Government has developed strategies for addressing labour shortages in rural areas. One strategy for meeting labour demand is through international labour mobility. Labour shortages have been partially met by 'backpackers' from multiple countries under the Working Holiday visa program (Curtain et al. 2018; Orton 2020). In 2008, the Pacific Seasonal Worker Pilot Scheme was trialled to enable Pacific workers to supplement the labour needs of Australian farms. In 2012, the current SWP commenced. In 2018, the Australian Government also established the PLS, which allows workers to be in Australia for up to 3 years.

Our focus for this study is the longer-running SWP, because:

- it is largely focused on agriculture, which aligns with the ACIAR focus on agriculture and rural livelihoods
- due to its seasonal nature, it enables circular migration.

The SWP supports Australian employers (for example, agricultural enterprises, farmers and accommodation providers) to host workers from Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu and Timor-Leste. To fill Australian labour shortages, such workers are permitted to stay in Australia for 6 to 9 months. In a comprehensive historical overview of the SWP, Doyle and Howes (2011) explained how, as early as 1984, reviews of Australia's international development program pointed towards the need for special migration programs targeting Pacific employment. The seminal *At Home and Away* World Bank publication provided the evidence base justifying the importance of a seasonal worker program (World Bank 2006).

This report, coupled with pressure from the horticulture sector in Australia, led to a series of inquiries and submissions, which resulted in the Pacific Seasonal Worker Pilot Scheme. After an evaluation that demonstrated the pilot program could meet the needs of the horticulture industry, the SWP was formalised in 2011 and commenced in 2012. The SWP aims to contribute to economic development in countries sending workers (sending countries), and assist employers in Australia (receiving country) to fill employment gaps that cannot be met by the domestic workforce (DESE 2021). The SWP became uncapped in 2015, and participation has grown steadily until the COVID-19 pandemic

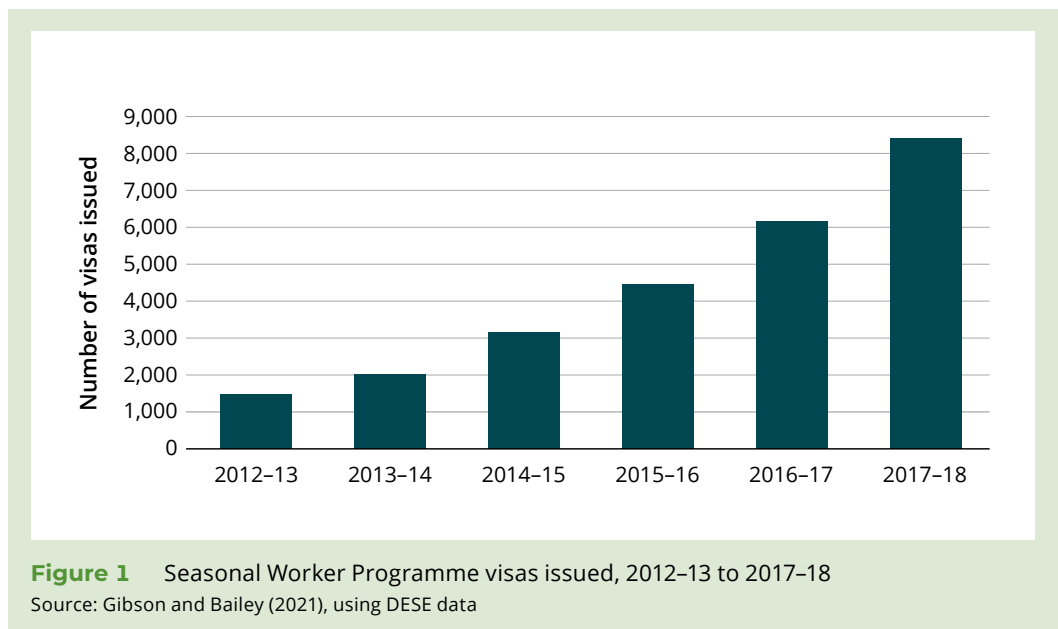
in 2020. When the pandemic hit, there were approximately 7,000 SWP workers in Australia (Commonwealth of Australia 2020a). SWP workers continue to arrive in Australia despite the COVID-19 pandemic, albeit in fewer numbers than before.

The consistent growth in SWP visas awarded per Australian growing season between 2012 and 2018 is shown in Figure 1. Between 2012 and 2019, Australia received over 37,000 workers from 9 Pacific island countries under the SWP (Lawton 2019). By 2018–19, the SWP had over 12,000 participants (Lawton 2019).

Tonga and Vanuatu make up a large proportion of seasonal workers under the SWP. Tonga, Vanuatu, and Timor-Leste have

the highest rates of participation. Solomon Islands is a more recent addition to the SWP, and has lower participation numbers, but since 2016 the number of workers from Solomon Islands has doubled annually (DFAT 2018). Figure 2 summarises the approximate participation per country for the SWP in 2018–19.

Participants in the SWP are predominantly male but female participation from some countries is growing. Tonga reached a high of 17% female workers in 2018–19. Vanuatu’s female participation has been more steady. For the 5 years until 2018–19, just over 15% of SWP workers from Vanuatu were female (Lawton 2019).



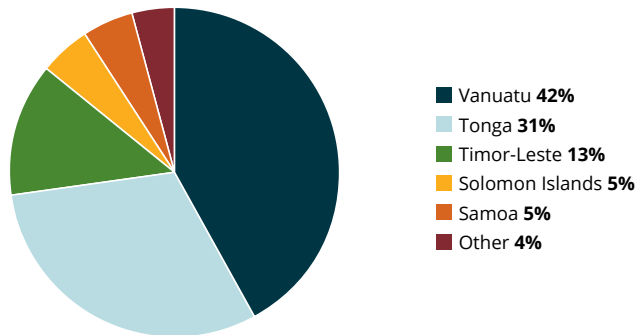


Figure 2 Share of participation by country in the Seasonal Worker Programme, 2018–19
Data is approximated, sourced from Lawton (2019) and Curtain and Howes (2020).

The economic benefits of the SWP are high. A 2018 evaluation found that the SWP has generated A\$144 million in income for Pacific island countries since 2012, and has had the highest development impacts in Tonga, Vanuatu and Samoa (World Bank 2018). Contributions from remittances are crucial for sending countries, with families of workers receiving income that they mostly use for household expenses and school fees (World Bank 2017). The program is also highly beneficial to the Australian horticultural sector, which has been plagued by continuous labour shortages as Australia’s fastest growing agriculture sector (Ernst & Young 2020).

The SWP offers opportunities for circular migration, as workers can choose to participate in the SWP multiple times, enabling workers to travel between their home countries and the receiving country several times. Around 60% of SWP participants work in Australia at least twice, and 70–80% of those who work a second season go on to participate multiple times (Curtain and Howes 2020). Repeat participation in the SWP provides scope to acquire significant earnings over multiple years and the accumulation of skills among return workers (Klocker et al. 2020). This circular migration is also positive from the perspective of employers, who benefit from not having to train new workers each year.

For Pacific islands workers to come to Australia under the SWP, each participating country has a Memorandum of Understanding with the Australian Government which, together with the SWP Implementation Arrangements (DESE 2020), underpins governance of the SWP (Curtain and Howes 2020). The SWP Implementation Arrangements allow 3 recruitment pathways, chosen at the discretion of the sending country government (Curtain and Howes 2020). A summary of the recruitment pathways, as outlined by Curtain and Howes (2020), is presented in Table 1.

Under some of these recruitment pathways, national governments sending workers under the SWP make their determinations regarding selection of potential workers. Some governments specify that potential workers must be unemployed, live in a rural area and/or come from economically disadvantaged villages (Dun et al. 2018), in order to enhance the potential development benefits of SWP participation.

The largest 5% of SWP employers employ 60% of total seasonal workers, meaning most workers end up in large operations (Curtain and Howes 2020). Previous studies have shown that SWP employers prefer workers from rural areas of Pacific island countries, and look to build relationships of trust with workers from particular areas, who may return for several seasons (Bailey 2019). However, there are equity considerations around allowing workers to return for many seasons, as others may miss out on the income-earning potential offered by SWP participation (Doan et al. 2020). There have also been a series of critiques and challenges associated with the program, both in Australia and in sending countries. These are frequently documented in the media and point to issues associated with housing conditions, isolation, deaths on roads and welfare issues (Commonwealth of Australia 2016). These critiques are scrutinised elsewhere, and while contextually important, are not the focus of this study.

Table 1 Summary of recruitment pathways under the SWP

Recruitment pathway	Summary
Work-ready pools of workers set up by sending governments	<ul style="list-style-type: none"> • Job seekers preregister for a work-ready pool and government officials select workers directly according to criteria nominated by Australian employers. • The final choice of who to pick from the pool normally rests with the employer (for example, choosing from a shortlist). • Solomon Islands and Tonga both have work-ready pools, but employers are not required to use them.
Direct recruitment	<ul style="list-style-type: none"> • Employers recruit workers directly. • Selected workers are required to meet various Australian Government requirements, detailed in the SWP Implementation Arrangements, including registration, health, police checks and pre-departure briefings. • Solomon Islands and Tonga both use direct recruitment.
Private sector agents	<ul style="list-style-type: none"> • Employers engage a licensed recruitment agent in-country to select workers. • Vanuatu is the only country to use this recruitment process.

Source: Curtain and Howes (2020)

2.2 Tonga

Socioeconomic context

Tonga is a lower-middle-income country. In 2105, 22% of people were living below the poverty line (FAO 2019b) and in 2020, 4.4% were unemployed (Asian Development Bank 2021). Over 77% of the population lives in rural areas and agriculture occupies 46% of land, contributing to 15–20% of gross domestic product. Agriculture accounts for 65% of exports, and subsistence rates are among the highest in the Pacific region (FAO 2019b). The main crops are cassava, yam, taro, sweetpotato and banana.

Tongans are generally highly mobile. The estimated overseas diaspora of 126,540 is larger than the resident population of 100,651 (UNESCAP 2020). Tonga's resident population has grown slowly since the 1960s due to significant emigration, particularly to Australia, New Zealand and the United States (UNESCAP 2020). Tonga's population is very young, with a median age of 22 years, and 39% under the age of 15 (FAO 2019b). Rural areas are home to 76% of people in the youth bracket (15–24 years of age). This creates a large, young labour force in rural areas with limited employment opportunities.

Due to a lack of employment and education opportunities in the rural islands, Tongans often move to larger towns, the capital city and overseas, with implications for rural areas, including agriculture (Taufatofua 2011; Chattier 2019). Migration is a common strategy in Tongan households to 'spread risks, diversify income and protect themselves against adverse income shocks' (Brown et al. 2014:449). This strategy has provided informal private social protection (in the absence of state-funded schemes), reduced poverty rates and generated capital investment, both physical and human (Brown et al. 2014).

International labour mobility

Tonga is one of the largest labour-participating nations in Australia's SWP, supplying 46% of the SWP's workers since its inception in 2008 (Curtain and Howes 2020). Tonga's participation in the SWP commenced in 2008–09, with numbers at 1,200 by 2012–13, 2,691 by 2016–17, and 3,737 by 2018–19 (Curtain and Howes 2020). Year on year, however, Tonga's share in the SWP decreased as the SWP grew overall. However, the participation of women from Tonga in the SWP is growing, from 10% in 2012–13 to 17% in 2018–19 (Curtain and Howes 2020). The average participant from Tonga is a married male, aged 33, with a secondary education (World Bank 2018). The World Bank (2018) notes that people with friends or family in Australia are more likely to be selected, with 63% of Tongan participants in the SWP receiving assistance from friends or family in Australia to secure their place.

Less than 15% of participants from Tonga in 2015 were employed in Tonga in the 6 months prior to joining the SWP (World Bank 2018), signifying the economic importance of program participation. Many Tongan households rely heavily on remittances and subsistence livelihoods, with internal mobility, often to urban areas in Tonga, also prominent. With little domestic economic growth, Tonga has been described as a mature migration–remittances economy (Brown et al. 2014). In the first 2 years of participation in New Zealand's Recognised Seasonal Employer (RSE) program, workers' aggregate income gains were NZ\$5.3 million, representing nearly half of New Zealand's development assistance to Tonga and equivalent to about 50% of Tonga's export earnings (Gibson and Bailey 2021). Earnings from labour mobility generally now contribute more to the Tongan national economy than the combination of international development

assistance and trade (Howes and Orton 2020). According to The Pacific Community (SPC) analysis, the contribution of total remittances to gross domestic product in 2018 was 40.7% (SPC 2020).

Income gains compared with earning potential at home for Tongan participants in the SWP are 5.6:1 (A\$137 net earnings per week in Tonga compared to A\$767 per week in Australia). This is higher than the Pacific-wide rate of income gain of 4.3 (World Bank 2018). Gibson and McKenzie (2014) found that households in Tonga participating in NZ's RSE scheme experienced a 34–38% increase in per capita income, a 9–10% increase in capital expenditure and a 122% increase in savings. Remittances are sent to a migrant's own household, and to others, including relatives and friends, churches and community groups (Brown et al. 2014). One study showed that the main uses of remittances were household consumption (23%), church contributions (17.7%), family expenses (15.9%), farm expenses (13%), housing/vehicle expenses (10.9%), school expenses (10.7%) and loan payments (8.5%) (Taufatofua 2011).

Local development benefits from seasonal labour mobility also extend to non-sending households in Tonga, such as through the increased local demand for construction labour and materials when returning workers spend seasonal work earnings on house improvements. Non-sending households also perceive advantages to local farming, fishing and education (Gibson and McKenzie 2014). Earnings from seasonal work contribute to some community projects in Tonga. For example, Gibson and McKenzie (2014) reported funding for street lighting, a school scholarship fund and community halls.

The loss of local labour in Tonga due to seasonal labour migration abroad is significant. Workers who went overseas to work on a farm represented 14% of the Tongan male workforce aged 20–45 in 2017–18 (Curtain and Howes 2020). This loss of workers has some negative impacts on those who remain. Taufatofua (2011) explains that SWP participation reduces the number of household members available to contribute to subsistence farming activities, such as tending longer-term root crops. With males more likely to go abroad to work in the SWP and RSE scheme, women in Tonga 'tend to bear the greatest burden of housework, caring for children and the elderly, and also fulfilling communal obligations of the village and church when men are away and tend to have limited opportunities for productive work outside the household' (Chattier 2019:62). However, some women are entrepreneurial and invest the remittances they receive in small businesses, including commercial agriculture, handicrafts, taxis and small retail shops (Bailey and Kautoke-Holani 2018).

In Tonga, the SWP is currently governed through a bilateral Memorandum of Understanding, and Tonga has appointed a liaison officer to Australia. Recruitment of workers in Tonga involves both a work-ready pool and direct employer recruitment (Curtain and Howes 2020). Tonga's Labour Sending Unit, in the Ministry of Internal Affairs, is responsible for the SWP and RSE scheme. Tonga is in the process of introducing legislation for the SWP and RSE scheme, and, as of 2019 has a new Migration and Sustainable Development policy that mainstreams migration into Tonga's national development planning and specifically focuses on participation in labour programs, seeking to address negative social impacts of these programs and maximise the benefits to sustainable development.

2.3 Vanuatu

Socioeconomic context

Vanuatu's population of 276,000 is only one-quarter urban, although rural-to-urban migration is significant and urban populations are growing faster than rural ones. Most of Vanuatu's population resides in rural areas dispersed across 80 islands, with a subsistence economy based on agriculture and fishing (FAO 2020a). The proportion of people living below the poverty line is 12.7% (FAO 2020a). Vanuatu has one of the world's highest population growth rates at 2.3%, with 39% of the population under 15 years of age and another 26% aged from 15–29 (VNSO 2016, FAO 2020). Around 24% of people living in rural areas are aged 15–29. Of the 17% of Vanuatu households headed by women, more than 70% are in rural areas (VNSO 2020 FAO 2020a). About 74% of rural households are engaged in cash-cropping.

Despite being highly vulnerable to natural disasters, Vanuatu progressed out of the Least Developed Country list in 2020. Economic growth is centred on agricultural improvements and international services (UNCTAD 2020). Key sectors in the economy are fishing, tourism and offshore financial services (FAO 2020a). Agriculture is the primary activity for most of the population, with about one-third of agricultural production being in commercial crops such as cocoa, coconut, kava and coffee (FAO 2020a). The highest-value export commodities are copra, kava, coconut oil, sawn timber, beef and cocoa (FAO 2020a). The contribution of agriculture, fishing and forestry to gross domestic product is 18% (VNSO 2020).

International labour mobility

Vanuatu had low rates of international mobility and an extremely small diaspora prior to its participation in Australia and New Zealand's labour mobility schemes (Gibson and Bailey 2021). However, over the history of both the SWP and RSE scheme, Vanuatu had the highest number of workers going to Australia and New Zealand combined, with a share of 41% in 2018 of total workers (Curtain and Howes 2020). The contribution of the SWP to Vanuatu's economy is significant, with A\$31.5 million in net income gains over the course of the program (World Bank 2018). Net gain per ni-Vanuatu worker after accounting for employment/opportunity cost is A\$7,425 per year since the SWP's inception (World Bank 2018).

Participation of ni-Vanuatu workers in the SWP commenced in 2008–09, with numbers at 119 by 2012–13, 2,149 by 2016–17, and 4,964 by 2018–19. In the 12 months to January 2020, 6,277 visas were granted to ni-Vanuatu workers (Curtain and Howes 2020). Ni-Vanuatu workers who went overseas to work on a farm represented 8% of their country's male workforce aged 20–45 in 2017–18 (Curtain and Howes 2020). The participation of women from Vanuatu in the SWP is steady at around 15% (Curtain and Howes 2020). Workers participating in the SWP are from various rural and urban areas of Vanuatu. In 2015, less than 30% of participants from Vanuatu were employed in the 6 months prior to participation in the SWP (signifying the SWP's importance for livelihoods) and the average participant from Vanuatu was male, aged 33, with a primary education (World Bank 2018). Males are more likely to go abroad to work in the SWP and RSE scheme, so women take on additional work caring for children and the elderly, and fulfilling communal obligations of the village and church, further limiting their opportunity to find cash employment (Chattier 2019).

Despite its small diaspora population, 31% of Vanuatu SWP participants receive some kind of assistance from friends or family in Australia to find a way into the SWP (World Bank 2018). Gibson and McKenzie (2014) found that households in Vanuatu participating in New Zealand's RSE scheme experienced a 35–43% increase in per capita income, 28% increase in capital expenditure and 188% increase in savings. In Vanuatu, participation in international labour mobility has seen increases in business ownership, use of iron and brick building materials in houses (over local, customary house-building materials) and increased use of solar panels (Gibson and Bailey 2021).

Households with an SWP worker were also more likely to acquire assets such as farm equipment (World Bank 2018). Agriculture represented the second-largest type of business investment stemming from SWP income (Bailey 2019). A study of RSE scheme workers from Vanuatu who returned for at least 3 seasons indicated 67% invested in small businesses, and 71% had done so after 10 seasons (Bailey 2014; Bailey and Kautoke-Holani 2018). Moreover, 98% of surveyed SWP participants thought the skills acquired in the SWP would improve their prospects of employment back home (World Bank 2018). Less is known about the use of remittances among family members and/or the wider community for business startups (Gibson and Bailey 2021). There are also concerns that participation in the SWP is reducing agricultural output in Vanuatu (Dornan 2018), while some remote communities may not have enough information about the SWP to ensure equity in access to the program (Gibson and Bailey 2021).

Earnings from seasonal work have assisted community development initiatives in Vanuatu. The Lolihor Development Fund, organised by 12 villages in Vanuatu, required returning seasonal workers to contribute A\$144 per season toward a community fund supporting women's projects and a scholarship fund for children (Gibson and Bailey 2021).

Ni-Vanuatu workers are recruited through private sector agents or direct recruitment, and there is no work-ready pool (Curtain and Howes 2020; Gibson and Bailey 2021). Workers are trained and recruited by licensed agents in Vanuatu, then Australian contractors place them with employers. The Vanuatu Government's role involves the Employment Services Unit in the Department of Labour and Employment Services. The relevant legislation is the Seasonal Employment Act (for the RSE scheme but implicitly used for SWP as well).

2.4 Solomon Islands

Socioeconomic context

As of 2020, Solomon Islands has a population of 712,000. The population is young, with 41% under 15 years of age (FAO 2019a). Solomon Islands is a Least Developed Country with 12.7% of people living below the poverty line (2013 data) and, in 2020, 10% of the population was undernourished (FAO 2020b). It is environmentally fragile, with issues such as overexploitation of forestry resources and sea-level rise. Eighty per cent of the population live in low-lying coastal areas and villages (Dun et al. 2020). The economy is based on tourism, subsistence agriculture, fishing and exports such as timber and palm oil. Copra is the most important cash crop, but cocoa and spices such as vanilla, cardamom, ginger and turmeric are also grown commercially in small amounts. Agriculture, fishing and forestry contribute 40% of gross domestic product (based on 2013–15 data in FAO 2019a). Internal migration is associated with urbanisation challenges such as the need for services and employment (MOFT 2013).

Over 80% of the Solomon Islands' population resides in rural areas, scattered over many remote islands (FAO 2019a). While over 70% of urban households have wages or salaries as their main income source, only 14% of rural households are in the same category (SINSO 2021). Nearly all rural households grow some of their food, such as sweetpotato, cassava, banana, yams and taro, and over two-thirds catch fish for household consumption (FAO 2019a).

Internal migration is common and occurs for cultural and social, and economic reasons, such as attending high school, marriage, attending to extended family obligations, or moving between areas where customary land rights are held (SINSO 2021). However, a very low proportion (0.3–0.5%) of the Solomon Islands' population migrate internationally (Dun et al. 2020; MOFT 2013). This is because, like Vanuatu (but unlike Tonga, which has a long history of migration to New Zealand preceding the RSE), Solomon Islanders have not had access to migration opportunities in countries such as New Zealand. Those Solomon Islanders who do migrate internationally are likely to be tertiary educated and the key destinations for these people are Papua New Guinea, Fiji, Vanuatu and Australia (MOFT 2013). Many of these migrants return to Solomon Islands following their studies (SINSO 2021).

Apart from tertiary education, seasonal labour mobility programs are the only international migration options for most Solomon Islands citizens, and are an opportunity for sustainable development (IOM 2020). Almost half (43%) of the population is not in regular employment and labour mobility is being prioritised in national policy as a way to address unemployment challenges over the long term (MFAET 2019). Total remittances inflows represent just 3% of Solomon Islands' gross domestic product (Doan et al. 2020); however, this may change with increasing demand for international labour mobility opportunities.

International labour mobility

Over the history of both the SWP and RSE scheme, Solomon Islands has had a market share of 5% in terms of numbers of workers going to Australia and New Zealand (Curtain and Howes 2020). Solomon Islands workers who went to Australia and New Zealand to work on a farm represented less than 1% of the Solomon Islands' male workforce aged 20–45 in 2017–18 (Curtain and Howes 2020). Before the COVID-19 pandemic, the Solomon Islands Government was working to increase participation numbers in the SWP and the number of Solomon Islanders participating in the program was doubling each year, up to 314 in 2018–19 (Dun et al. 2020). Larger numbers of Solomon Islands workers have participated in the RSE scheme (643 in 2017–18). Despite low numbers, opportunities for labour mobility are growing and there is increasing interest in Solomon Islands to augment their participation in these programs.

Solomon Islands recruitment occurs through a work-ready pool or direct recruitment (Curtain and Howes 2020). Recruitment of Solomon Islands workers occurs via the Labour Mobility Unit in the Solomon Islands Ministry of Foreign Affairs and External Trade (MFAET). MFAET,

under the Solomon Islands Labour Mobility Strategy 2019–2023, plans to increase the number of Solomon Islanders participating in international labour mobility, especially the Australian SWP and PLS (Dun et al. 2020). An Australia-based liaison officer is employed through the SWP Boost Program, funded by the Australian Government's Department of Foreign Affairs and Trade (DFAT) (Curtain and Howes 2020).

2.5 COVID-19 border closures

Border closures across the Pacific and Oceania due to the COVID-19 pandemic meant many Pacific islands labour mobility workers already in Australia in 2020 were stranded, including nearly 7,000 SWP workers (Table 2). Australian farms experienced labour shortages, as migrant farm workers from other countries – such as 40,000 backpackers – left Australia in April and May 2020 (Doan et al. 2020). Despite an overall labour shortage, there was an uneven effect on the employment, earnings and remittances of Pacific islands workers in Australia. About two-thirds of workers experienced fewer work hours and lower weekly earnings, with women affected more severely than men (Doan et al. 2020).

Table 2 SWP workers by location of work in Australia and country of origin, 21 May 2020

Country of origin	NSW	NT	Qld	SA	Tas	Vic	WA	Total
Fiji			25	46		25	49	145
Kiribati	47		2	61	21	28		159
Papua New Guinea	5		68	6		5		84
Samoa	30	8	238	0	10	74	14	374
Solomon Islands	2		51	28	1	35		117
Timor-Leste	61	48	112	211	144	327	158	1,061
Tonga	90		417	181	449	463	62	1,662
Vanuatu	453	79	986	690	130	859	139	3,336
Total	688	135	1,899	1,223	755	1,816	422	6,938

Source: IOM (2020:22)

As a result, remittances became less frequent and involved lower amounts. For Tongan workers, remittances dropped by an average of 48% per transaction and for ni-Vanuatu workers it was 57% (Doan et al. 2020). There is no comparable data for Solomon Islands.

The pandemic also exacerbated existing issues around isolation, family separation, and vulnerability to exploitation, and pandemic-specific social protection for seasonal workers, in destination countries, has been limited (Doan et al. 2020; Petrou et al. in press). However, despite the negative impacts of the pandemic, research by Doan et al. (2020) showed that Pacific islands seasonal workers remain fairly satisfied with their experience and expressed a desire to return to Australia in the future. Workers from Tonga had a high average satisfaction (1 being 'not satisfied at all' and 10 being 'extremely satisfied') rating (9.2/10) during the challenges of 2020, and workers from Vanuatu had a moderately high satisfaction rating (7.8/10) (Doan et al. 2020).

Following lobbying from Australia's agriculture sector, the Australian Government and various Pacific islands governments also acted to restart the flow of workers into Australia, which had been paused for most of 2020. A successful trial of ni-Vanuatu mango pickers in the Northern Territory took place in September 2020. By November 2020, all of the SWP labour-sending countries agreed to recommence their participation in the program. By late 2020, workers were arriving in Australia from Tonga, Fiji and Solomon Islands. This was before a COVID-19 vaccine was developed and before many Australian citizens could return to Australia. This demonstrates the value of Pacific islands seasonal workers to agriculture in Australia (Petrou et al. in press).

2.6 Research gap

Despite extensive economic and governance analysis of the SWP, there is very little information about its agricultural dimensions. This is surprising, given that horticulture is crucial to Australia's export markets and food security narrative, and that agricultural livelihoods are a core area of economic development for Pacific island countries. One under-explored area is the perspectives and experiences of workers and employers regarding how agricultural practices and skills are developed by seasonal workers, and their transferability to Pacific islands contexts through circular labour mobility. Both Pacific island countries and Australia are facing major climate risks. While the scale of adaptation will differ, the principles of protecting crops and building resilient value chains offer transferable lessons between the countries.

The COVID-19 crisis has impacted Pacific islands workers involved in international labour mobility programs, with flow-on effects for Pacific islands communities (Doan et al. 2020). Analysis by the World Bank shows that SWP workers already in Australia have been impacted by a lack of access to Australian social protection measures, language barriers, and proximity of living conditions and working conditions (Doan et al. 2020). These impacts are also gendered, with female workers earning significantly less than male workers both before and after COVID-19 lockdown measures. With limited migrants from other mobility programs, such as the working holiday maker program, the horticulture sector in Australia will continue to experience significant labour shortages (Ernst & Young 2020). The Australian labour gap, combined with the eagerness of Pacific island country communities to send workers to Australia, creates an opportunity to study the contribution of circular migration to Pacific sustainable development.

3 Methodology



3

Methodology

3.1 Research goal, objectives and questions

This goal of this research was to understand the barriers and enablers for agricultural knowledge and skills exchange between Pacific islands SWP workers and Australian farmers who are participants in the SWP.

The specific study objectives were to:

- analyse cases where knowledge and skills gained from participation in the SWP are being applied in 3 Pacific island countries
- identify the factors that prevent and underpin the success of knowledge and skills exchanges and transfers between Pacific island countries and Australia, and explore opportunities for enhancing learning
- synthesise the types of food production value chain skills that can be enhanced and transferred to support Pacific islands value chains (such as production, harvesting, packaging, logistics, food losses and marketing).

To address this goal and the objectives, the following research questions guided the study:

- What types of agricultural knowledge and skills have Pacific islands seasonal workers gained, or would like to gain, across the food production value chain while working in agriculture in Australia?
- How have returned Pacific islands seasonal workers applied agricultural practices, incomes, knowledge and skills gained while working in Australia to agriculture in their own countries, and what barriers do they face in doing so?
- What opportunities exist for Australian and Pacific islands governments to build agricultural and food production value chain training and knowledge exchange into Pacific labour mobility programs like the SWP?
- What further research is needed to bolster agricultural knowledge and skills exchange opportunities as part of seasonal labour mobility programs?

This study's research questions and subject matter required our team to elicit qualitative insights from SWP workers and employers. Qualitative methods allowed us to explore the nuances of agricultural knowledge and skills exchange between workers and employers and the application of skills by workers on their return to home countries. To overcome Western epistemological biases and the inevitable power relations in conducting face-to-face research,

we developed the interview protocols and data collection procedures with community-based partner organisations that have extensive experience working with Pacific islands farmers and people.

3.2 Research partnerships

This research was designed to centralise the guidance, advice and expertise of Pacific islander-led organisations that are experienced in working with Pacific islands communities, including rural communities. The research team developed purposeful partnerships with community-based organisations in Australia, Solomon Islands, Tonga and Vanuatu. These organisations provided cultural expertise, language assistance and took part in the data collection process. All project partners were formally contracted and compensated for their input, were involved in reviewing the report and took part in a feedback session with the research team.

In Australia, as the study site was Queensland, PICQ was engaged as the Pacific-led partner organisation for this research. PICQ represents the voice and views of Queensland-based Pacific islands national organisations at all levels of government and other agencies on matters that affect their communities and individual wellbeing. PICQ works to enhance the capacity of its members to participate fully in all aspects of Queensland society. Through their leadership group, PICQ provided the team with advice on inviting seasonal workers to participate in the study, reaching out to employers, designing data collection to align with SWP workers and employers' schedules, and managing the potential sensitivities of the topics discussed during interviews. PICQ supported the identification of relevant Queensland farming locations where SWP workers were working on farms with similar crops to

those grown in Pacific island countries and recruited SWP workers and employers to participate in the study.

In the Pacific island countries, we worked with the Pacific Island Farmers Organisation Network (PIFON). PIFON is responsible for supporting and overseeing research and capacity development activities with its member farmer organisations across 9 Pacific countries and territories. PIFON focuses on exchanging and sharing information, and this project allowed it to continue capturing the voices of farmers to understand how the SWP has benefited their agricultural practices and broader livelihoods. Consequently, the role of farmer organisations, as a means for effective engagement and as a conduit for small-scale farmers, was amplified by being a part of this structured research process.

As an active agricultural research group in the Pacific, PIFON has recently overseen studies into the impacts of the COVID-19 pandemic on Pacific islands farmers (PIFON 2020). PIFON's strong relationship with farmers and rural communities puts it in a strong position to undertake data collection. PIFON's main office is in Nadi, Fiji and we worked with PIFON staff to coordinate a series of meetings and online sessions to go through the research protocols with farmer organisations in Solomon Islands (Kastom Gaden Association), Vanuatu (Farm Support Association) and Tonga (Growers Federation of Tonga). Together, we discussed the research protocols, language, record keeping and recruitment process to ensure consistency across the study.

3.3 Research site selection

Australia was selected as a study site because it is the host country of the SWP and this selection allowed us to interview SWP employers. Within Australia, Queensland was selected as the study site because it is one of the Australian states that has relatively similar agroclimatic conditions to those in Pacific island countries, and it has had 38% of all seasonal workers under the SWP since 2012 (Curtain and Howes 2020). Among Pacific island countries, 3 study countries (Solomon Islands, Tonga and Vanuatu) were selected based on their differentiated international migration experiences and SWP participation rates.

Tonga has a long history of dependence on overseas diaspora and international emigration, even before the recent government-managed Pacific labour mobility programs began. Tonga also has very high rates of SWP participation, including during the 2008 pilot phase of the program. Vanuatu also has very high rates of SWP participation, but does not have such a strong history of high dependence on overseas diaspora and international emigration. Solomon Islands has low rates of international emigration and also has comparatively lower SWP participation rates. Once these 3 countries were selected, the focus for the next stage of site selection was based on agriculture.

The PIFON head office in Nadi, Fiji, worked with the project team leader to discuss possible farmer organisations that had capacity, availability and experience in undertaking similar projects with farmers. PIFON's main office identified and engaged relevant member organisations: Kastom Gaden Association (Solomon Islands), Growers Federation of Tonga, and Farm Support Association (Vanuatu).

3.4 Data collection

Data collection in all 4 countries of this study took place between March and May 2021, following ethics clearance from the Institute for Sustainable Futures at the University of Technology Sydney in March 2021. In preparation for data collection in Australia, online meetings were held with PICQ to narrow participant recruitment processes, identify field sites and discuss research ethics and protocols. In preparation for data collection in the 3 Pacific island countries, a series of online meetings and sessions were held to discuss research protocols with the 3 selected farmer organisations. These online meetings and sessions discussed the research ethics, methods, record keeping and participant recruitment process to ensure consistency across the different country study sites.

Target study participants

Our target study participants were:

- Australian SWP employers
- male and female SWP workers (both in Australia and Pacific island countries) who had farming experience in their home countries and who had participated in the SWP at least once (ideally more than once) to capture the longer-term circular nature of learning and knowledge application.

In Australia, SWP employers were recruited by email and phone calls through connections provided by the Australia-based labour mobility coordinator for Solomon Islands and PICQ's network members. We specifically sought to engage with SWP employers who were willing to allow their workers to talk to us either during work hours or in their free time. Recruited SWP employers then provided connections to their SWP employees, some of whom agreed to also participate in the research once they were briefed about the study by the research team.

Interview guides

An interview guide (see Appendix 1) for use in interviews with all SWP workers in Australia and Pacific island countries was designed according to the 4 research questions in this study (see 3.1: Research goal, objectives and questions). The guide started with questions to help build rapport between the interviewer and the research participant, including questions about farming systems in the participant's relevant home Pacific island countries, family and home connections, and experiences of travel and working in Australia and Pacific island countries.

The interview then followed a 4-part process:

- the types of agricultural knowledge and skills SWP workers had learned and would like to learn through their participation in the SWP
- the application of agricultural knowledge and skills in Pacific island countries and Australia
- the benefits and opportunities of the SWP
- ideas for agricultural knowledge exchange and training opportunities via the SWP.

Semi-structured interviews with Australian employers were also guided by this 4-part process.

Data collection process

Interviews with SWP employers and workers in Australia took place in April and May 2021. Queensland interviews were organised in close collaboration with PICQ, and PICQ members travelled to field sites to participate in the interview process. The Australia-based team undertook in-person interviews over 2 separate field trips in southern and northern Queensland, in areas within approximately 400 km of Brisbane and Cairns. Interviews with 25 SWP workers in Australia (**Table 3**) were conducted as 6 separate small-group discussions. These group discussions were based on the worker's nationality, with between 2 and 6 workers per group. Semi-structured interviews with 4 employers in Australia, interviewed individually, took place to understand their perspectives on current and future opportunities for agricultural knowledge and skills exchange via the SWP. Interviews in Australia were audio-recorded and then transcribed.

In the Pacific islands, 38 SWP workers were interviewed as individuals by PIFON network member representatives in Honiara (Guadalcanal province) in Solomon Islands, Tongatapu in Tonga, and Efate (Shefa province) of Vanuatu. In Tonga, all interviews were conducted in Nuku'alofa at the Growers Federation head office. The small geographic layout of Tonga meant that seasonal workers were mostly peri-urban or urban-based. Interviews

Table 3 Number of SWP workers interviewed for this study by location

SWP worker's country of origin	SWP workers interviewed in Australia	SWP workers interviewed in the Pacific islands	Total
Solomon Islands	14	16	30 (48%)
Tonga	7	15	22 (35%)
Vanuatu	4	7	11 (17%)
Total	25	38	63 (100%)

were conducted both at the Kastom Gaden offices in Honiara and in peri-urban settings in the Guadalcanal province. In Vanuatu, interviews were conducted in Efate. Specific locations will not be identified, to protect the identity of participants. The data was collected as each farmer organisation thought best for their needs, as long as it followed the question guide provided. All question guides were populated by the researcher as participants answered questions, and shared in a secure folder with the research team.

Additional information about the SWP workers and employers interviewed for this study is shown in Tables 4 and 5. SWP workers interviewed had participated in the SWP for periods ranging from 1 to 10 years. Two-thirds of participating SWP workers had participated in the SWP only once or twice (42 respondents), 7 SWP workers had

participated 3 times, 5 SWP workers had participated 4 times, and the remaining SWP workers (13%) had participated in the SWP for 5 years or more. Around three-quarters (78%) of workers were male and 22% were female.

The majority of SWP participants involved in this study had worked in Queensland (76%) at some point during their seasonal work experience, but collectively they had worked in all Australian states and territories except Western Australia and the Australian Capital Territory. The study sample encompassed diverse ages, with 39 of 63 seasonal workers aged between 25 and 49 years. We also formally interviewed 4 employers who employed relatively small number of Pacific seasonal workers (Table 5).

Table 4 SWP workers interviewed for this study, by gender

Country of origin	Male (number)	Female (number)
Solomon Islands	27	3
Tonga	15	7
Vanuatu	7	4
Total	49 (78%)	14 (22%)

Table 5 Queensland-based SWP employers interviewed for this study

Employer	SWP workers employed at the time of interview	
	Country of origin	Number
Employer 1	Solomon Islands	8
Employer 2	Tonga	22
Employer 3	Vanuatu	23
Employer 4	Solomon Islands	6

The seasonal workers were largely employed in the horticulture sector. This is unsurprising given estimates that 68% of Australia’s horticulture workforce is migrant labour, 8% of whom are Pacific seasonal workers, with the large majority of other workers being on Working Holiday visas or domestic workers (Curtain et al. 2018). Figure 3 shows the broad types of horticultural crops that the participants said they had worked with while on farms in Australia. Box 1 lists the specific types of crops.

Box 1: Horticultural crops SWP workers worked with on Australian farms

Almond, asparagus, avocado, banana, basil, beans, blueberry, broccoli, cabbage, capsicum, carrot, cauliflower, cherry, chilli, corn, cucumber, garlic, ginger, grapes, kale, kiwi fruit, lettuce (rocket), lettuce (salad), mandarin, mango, nashi pear, nectarine, okra, onion, orange, parsley, pear, pumpkin, rockmelon, shallot, silverbeet, sugarcane, sweetpotato, tomato, watermelon, wombok and zucchini.

We also asked the SWP workers about the types of food production they practised in their home countries. All but 2 workers said they were involved in some type of food production. The majority of respondents said they grew food in some type of home garden, or a combination of home garden and other land located in or near their village.

The types of foods grown were diverse, including but not limited to banana, cabbage, cassava, beans, bok choy, chillies, coconuts, kumara, pineapples, guava, a range of root crops, lime, mandarins, snake beans, peanuts, taro and a range of leafy greens. Twenty-eight workers also had some small-scale livestock production in their domestic food systems.

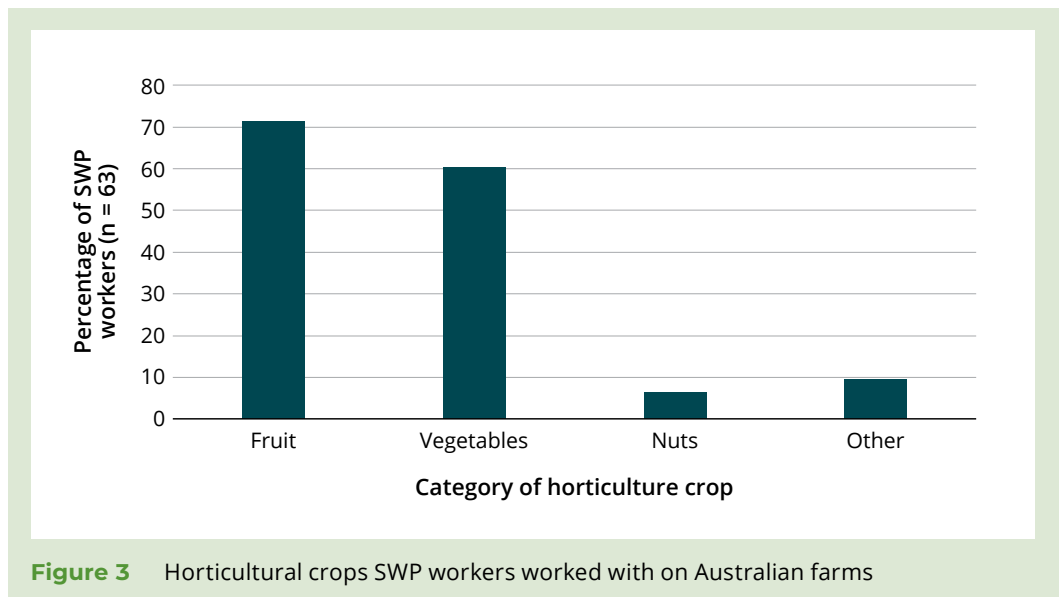


Figure 3 Horticultural crops SWP workers worked with on Australian farms

3.5 Data analysis

Interviews conducted in Australia with SWP workers and employers were transcribed in full, where possible. Interviews conducted with SWP workers in Solomon Islands, Tonga and Vanuatu were not audio-recorded. The answers written in each data sheet were organised in NVivo (qualitative data management and analysis software).

To analyse the data, first, a spreadsheet was used to record responses from all 63 SWP workers that could be converted into measurable descriptive statistics. Second, a data coding framework document (see Appendix 2) was developed to enable the coding of all 63 SWP workers and 4 SWP employer transcripts or template document notes. This coding framework was structured to capture the perspectives of both SWP workers and employers about agricultural knowledge exchange, barriers and opportunities according to different aspects of agrifood system value chains. This coding framework was useful to situate participants' open-ended responses in line with our study research questions.

Data analysis was undertaken by 2 members of the author team (Davila and Dun), and tested through discussions and review with the other members of the team. PICQ and PIFON also provided reflections after data collection and analysis. PIFON helped us reflect on the learning opportunities from conducting this study across 3 Pacific island countries in parallel, given the international travel constraints due to COVID-19 related restrictions. Results of the research are discussed in the remainder of this report. The following chapters address each of the study's 4 research questions.

4 Knowledge gained by SWP workers



Photo: Conor Ashleigh

4

Knowledge gained by SWP workers

This chapter presents results related to the range of knowledge and skills gained through the SWP as reported by the workers interviewed, as well as the perspectives of employers. We use quotes throughout as illustrative examples of the individual perspectives of workers and employers, rather than seeking consensus views. This study is exploratory and the context of each Pacific islander's experience in the SWP is unique, as are the home and food production systems in their countries of origin. Where possible, we use descriptive statistics to illustrate aggregate responses to questions in our interview guide to provide insight into the prevalence of some topics discussed. We first present results on the extent to which the different Pacific islands and Australian food production and value chain contexts create a learning environment for workers. We then outline a range of agricultural skills acquired and applied by seasonal workers, with a focus on the different skills in various parts of agrifood value chains.

4.1 Differences in farm scale

The value of Queensland vegetables, fruits and nuts exceeded A\$1.5 billion in 2019–20 (Queensland Government 2019), while the total annual export value of all horticulture commodities for the entire Pacific islands region is approximately A\$3.4 billion, with Papua New Guinea making up over 50% of those Pacific exports (PHAMA 2020). The difference in size and scale of Australian farms compared to Pacific islands farms was acknowledged by the SWP workers interviewed.

One group of Solomon Islands workers interviewed in south-east Queensland, who came from Malaita and Western provinces, discussed that the mixed farming systems used in their home food gardens were different from the monocropping systems they experienced in Australia. Solomon Islands workers noted similar thoughts in Honiara. One worker said that in Australia 'farm size is big, and time management is important – time spent for production is very critical to Australian farmers' (Solomon Islands Worker 1). These differences create both barriers and opportunities for SWP workers to gain different knowledge through time spent working on Australian farms, and influenced how workers involved in this study perceived the transferability and relevance of their Australian farm experience to everyday farming practices in their Pacific island countries.

This chapter focuses on identifying knowledge and skills acquired by SWP workers while they are employed in Australia, despite differences in the scale of farming. In the next chapter, we discuss the challenges that these differences in farm scale and production pose to knowledge and skills transfers under the SWP.

4.2 Agricultural skills

The top workplace activities that SWP workers were undertaking on Australian farms were picking and harvesting (85% of participants), planting (52%), pruning/desuckering (50%) and weeding (34%). Other in-field tasks included seed preparation, pest management, water and irrigation management, nursery production, fertiliser application and tractor driving. In contrast, off-field tasks were related to packing shed work and included grading and sorting produce, packing produce

and driving forklifts. Figure 4 summarises the type of farm activities participants performed in Australia. These work tasks provide the basis for some of the SWP workers practical on-the-job learning of different agricultural knowledge, and their broader observations while working on Australian farms also contributed to knowledge they acquired.

We asked participating workers about what they were learning in large-scale Australian production systems that might be applicable for their Pacific islands food growing contexts, and if they had directly changed any of their agricultural practices upon returning home. Workers identified the use of machines, synthetic chemicals, and farm mode and business management as key points of distinction between Australian industrialised farming and smallholder and subsistence farming in Pacific island countries.

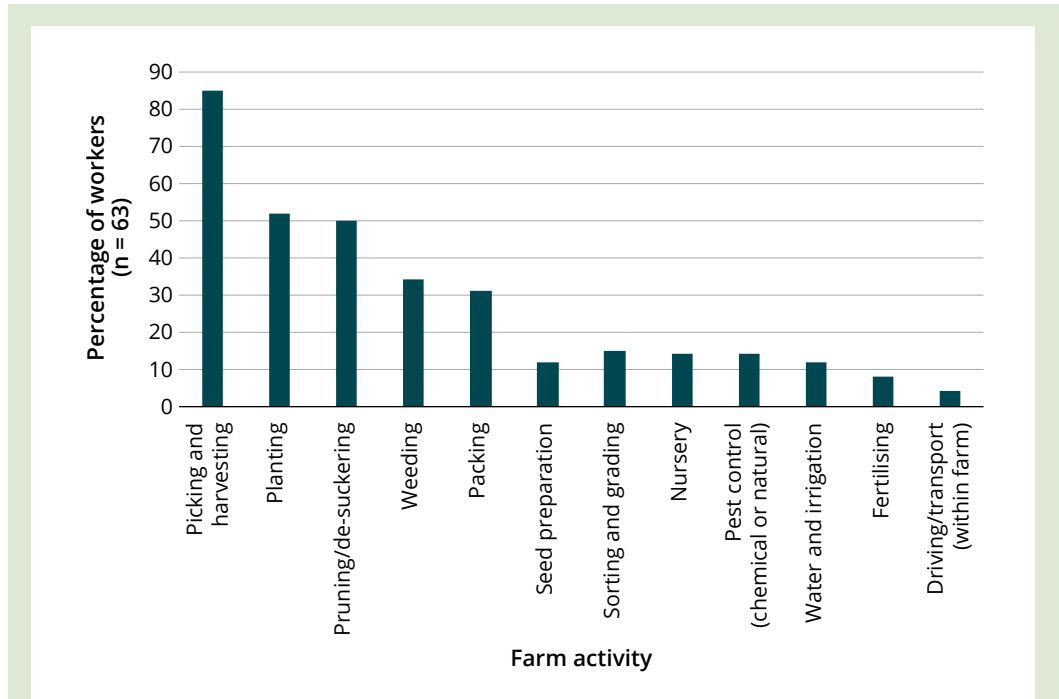


Figure 4 Farm activities undertaken by SWP workers on Australian farms

Overall, 70% of the SWP workers said they had learned something relevant from Australian farms, indicating their appetite and capacity for acquiring different agricultural knowledge. For instance, one worker referenced how the large-scale monocropping of bananas was of interest, particularly regarding the use of water (ni-Vanuatu Worker 7). Another seasonal worker, employed on a Queensland farm that grows leafy greens, reflected on the differences between agricultural systems and how the experience of working in Australia provided insight into other modes of farm management:

Here [in Queensland], we have a time to plant, and then after 8 weeks we harvest. Every week [we work on] one block. For us [back at home] we don't follow the time and we just plant. [In terms of learning], how they manage the farm is what I learn. [One employer] is always coming out with us in the field and [the other] is in the office. (Solomon Islands Worker 13)

Workers' exposure to how Australian employers operate their farm businesses, notably the administrative systems, provides different insights into how a farm business can be managed. Workers did not discuss the direct transferability of these farm business management skills, given the different scale at which agriculture and agribusiness operate in Pacific island countries. However, other types of on-farm learnings were perceived as more transferable.

We found that 46% of SWP workers interviewed had concrete examples of applying knowledge or skills learned in Australia to their crops or farms in their countries. Approximately 45% of SWP workers said they had invested in their Pacific islands farms through their SWP income and gave examples of how their SWP experience had been used in their home gardens or on their farmland in Pacific island countries.

One Tongan worker in south-east Queensland summarised the overall experience of working in agriculture and interacting with their Australian employer, and how this supported their thinking about how to grow food in Tonga and their plans to invest in their own farm:

[the employer] told me the best thing in farming is [the use of] chemicals and [constant] pruning ... you have to look after your trees so they can give you good quality fruits. Our supervisors [also show us] how to do the irrigation. I'm learning how to do some of the piping so I'm planning when I go back [to] try some of the irrigation stuff from here just on the cabbage. (Tongan Worker 16)

Box 2 presents a synthesised account that draws from interviews with a group of Solomon Islands workers on a farm in Queensland, to summarise how SWP workers and employers work together to develop on-farm skills. The account highlights the diversity of experiences and farm systems seasonal workers are exposed to as circular migrants. They may spend one season working on a large banana plantation, where they interact with other workers under different labour visas. In these large systems, they may never interact with the employer, but be one of many workers who are overseen by farm managers or other migrants. In following seasons, they may be recruited to work on a much smaller farm, where the employer works alongside them every day.

Box 2: Multiple years of SWP experience provides exposure to diverse Australian farms

Jimmy* lives in Malaita, Solomon Islands, where fishing and agriculture provide his daily livelihood. Jimmy and William, a friend from the same village, have both been to Australia under the SWP over 3 seasons to work on 2 types of farms: a large-scale banana plantation, and a smaller-scale mixed vegetable and livestock property.

On the large banana plantation, they were given very specific jobs. Jimmy worked on desuckering banana plants and crop maintenance, and William was responsible for carrying 80 kg bags of bananas to the truck. William, because of his agility and skills, was also responsible for supervising 10 workers from different countries on the farm.

Both Jimmy and William are amazed by how many workers are employed on Australian farms – over 500 in the case of that banana plantation: ‘It is impossible to know them all, and the farm managers don’t know who they are.’ Jimmy learned that desuckering banana plants can improve the yield, allowing plants to grow more productively. He plans to try that technique on his few banana trees at home in Solomon Islands – he finds the multiple shoots on his own banana trees just grow, which limits plant and fruit growth.

With their new employer, who manages a smaller vegetable and livestock property, William and Jimmy are part of a group of just 8 workers on the farm. They are involved in multiple activities for the vegetable side of the business – planting, weeding and irrigation, harvesting, packaging and loading produce onto the truck. As a small group, all from Solomon Islands and some from the same village, they work efficiently as a team. They troubleshoot and improvise, and work with the farm manager and employer out in the field all day. On rainy days, William and Jimmy enjoy the dinners prepared by their employer. They feel at home, welcomed and respected by the Australian farmer. The workers have developed a trustful approach to working on a farm, mirroring their way of working in Pacific island countries. They feel respected, valued and able to ask questions, while also following the required farm procedures of the Queensland farm.

** All names have been changed.*

Daily interactions with their employers – Australian farmers – can expose SWP workers to multiple types of farm management processes that would probably contrast with their home garden systems or small farms in Pacific island countries. The story in Box 2 also showcases the value and benefits of the SWP, which have been reported elsewhere as including improved incomes, livelihood diversification and the ability to pay for school fees and other household expenses (World Bank 2018).

The following sections explore some of the knowledge acquired by SWP workers on Australian farms in greater detail:

- cropping skills
- technologies
- processing and marketing.

Cropping skills

SWP workers identified knowledge and skills related to some aspects of crop management that were transferable between Australia and Pacific island countries. One example was plant spacing to maximise productivity and nutrient uptake. Plant spacing is an important management technique for crops in agriculture and agroforestry systems (Page et al. 2012). One Solomon Islands worker said that in Australia they notice 'proper spacing for each crop and...use [of the] proper harvesting tools, [and] also harvesting at the right time for selling to avoid spoilage' (Solomon Islands Worker 17). The worker indicated that they shared their knowledge of spacing, fertiliser and pesticide use with their family members upon their return home.

Desuckering and pruning crops were tasks performed by 50% of SWP workers during the time spent working on Australian farms. Desuckering is a common horticultural technique used on banana plants, where new suckers are removed from the base of the plant to improve plant growth by allowing a single stem to develop, rather than having multiple stems competing for resources. In traditional polycultural farm systems, suckers are commonly left to grow on banana trees. On large-scale commercial banana farms in Australia, desuckering banana plants is a common task that requires skill and precision. One employer explained the value of workers who develop adequate desuckering skills, as they are more efficient in their daily field jobs. The employer explained: '[they] will go along there with a sharpened spade ... and they'll go along and take off any of the baby plants that aren't going to be used. So it's a bit of a skill ...' (Employer 2).

SWP workers expressed their interest in desuckering and its applicability to agriculture in their home countries. In one group interview, there was a conversation around the value of desuckering, with 4 Solomon Islands workers explaining the value of these skills in their country. During that conversation, one worker explained:

back home, we do not thin the baby [plant]. At home we just let it grow. I [got some] ideas from this. [I noticed that] after cutting the babies out, the plant grows better. There is a difference. I have not seen people doing this [in Solomon Islands]. (Solomon Islands Worker 20)

Pruning, more commonly practised in citrus or orchard trees, was also a skill developed in Australia and subsequently applied at home, in Pacific island countries, across different crops. One Tongan worker said:

I learn to prune the fruit trees even though we do not have the same orange with Australian farm but we have orange here [in Tonga]. But I applied here [in Tonga] and it worked, not only in orange but I applied on different fruit trees on my plantation and at home. (Tongan Worker 11)

This quote indicates how the practices and observations SWP workers make during their time on Australian farms allows them to transfer techniques to their home contexts, even if there are different crops and production systems. This supports previous evidence of the transferability of pruning to different crops in Pacific island countries based on SWP participation (Dun and Klocker 2017). In transferring pruning skills, one worker in Tonga said they are doing ‘pruning of breadfruit, avocado and mango trees that have been in the [my] plantation for more than 15 years without pruning’. Similarly, a Solomon Islands worker said that upon their return home, they used techniques learned in Australia to prune lemon and local apple trees around their house. He also described training his family members ‘how to proper[ly] prune their fruit trees and plants around their homes’ (Solomon Islands Worker 6) based on techniques learned in Australia.

An interview with a Tongan worker also illustrated the value of pruning skills, learned in Australia, for his family at home:

I went back home [and] did some pruning of the mandarins and lemons and so next time my grandma says, ‘Wow this makes a lot’ and I said, ‘Yeah, you have to do a lot of pruning’ ... Pruning creates more food. I do it in the little mango tree, because when there’s lots of branches coming down I do the bad ones and keep the good ones. (Solomon Islands Worker 6)

These examples show that standard horticultural and crop maintenance practices are being readily and easily transferred to Pacific islands contexts, and Pacific islands farmers are noting improved harvests based on the application of these techniques.

Participants explained the overall changes they made to what they planted and sold in their Pacific island countries after spending time as seasonal workers in Australia. One worker said:

[I] started to plant new crops that I did not normally grow, such as tomato and capsicum. I know how to properly plant capsicum and different planting techniques [including] watering of crops, use of herbicides and soil cultivation. We learned new techniques [for] growing crops [as part of the SWP] and looking after them, such as watering and mulching. (Solomon Islands Worker 2)

Another participant said he ‘started a melon farm [and was] using rows before planting the melon seeds’ (Solomon Islands Worker 8). He also transferred skills relating to fertiliser application and adequate water drainage to his home garden in Solomon Islands after only one season as a SWP participant.

Soil management was mentioned by 2 returned SWP workers in Honiara as a skill they developed during their time in Australia. They explained that they learned about 'soil management by mixing the soil properly and applying of fertiliser' (Solomon Islands Worker 1) as well as the 'use of herbicides and [the] soil cultivation process' (Solomon Islands Worker 2). Another worker said that after observing farming techniques in Australia, they returned to Solomon Islands and adapted their 'soil management, [and] watering of plants daily' (Solomon Islands Worker 12) and have achieved 'more harvest than before'.

Participation in the SWP can motivate some workers to set new goals and visions for their farms, and for their farming community. This is detailed in Box 3 through accounts drawn from different interviews.

While the example in Box 3 was unique in our dataset, it shows how some individuals are entrepreneurial and interested in linking their seasonal work experience with broader, structural changes to their home farming systems. In Box 3, Jayson discussed having observed pollination equipment for tomatoes in Australia, and has visions of establishing coordination among farmers in Vanuatu to share knowledge and opportunities on tomato growing. This demonstrates the capacity of individual SWP workers to become champions of different farming systems upon returning to Pacific island countries, with the potential to foster more collective benefits. Yet limitations related to technology and infrastructure remain. These aspects of SWP workers' experiences in Australian agriculture are discussed next.

Box 3: Goal setting and establishing grower associations after being a seasonal worker

Jayson* is an SWP worker and subsistence farmer in his early 30s. He is from a 5-member household on an island in Sanma province, Vanuatu. He farms with his wife, growing common staple crops (banana, cabbage, kumara, manioc, taro, vegetables and yam) and raising livestock (cows, chickens and pigs). Jayson has participated in the SWP for 4 years, working on fruit and vegetable farms in South Australia and Victoria, including working on asparagus, avocado, grape and tomato crops in both glasshouse and open-field growing conditions.

Jayson does not plan to grow tomatoes alone in Vanuatu. Instead, he plans to establish a network of tomato growers. He said this is important because he has noticed how small groups in Vanuatu have formed to grow tomatoes, vegetables and vanilla to help recover from the impacts of Tropical Cyclone Harold.

With this in mind, Jayson discussed his vision for maximising his SWP earnings to establish an office for a family-run tomato growing association in Vanuatu. However, he still needed support to create a market for tomatoes in Vanuatu and to access a machine to pollinate tomato flowers (which he had seen in the tomato glasshouse farm he worked on in Australia). He suggested that his own government might be the institution that could support this second need. A project like this would benefit livelihoods and economic outcomes in his country.

** All names have been changed.*

Technologies

Throughout the interviews, SWP workers explained how Australian employers' use of infrastructure and technologies is potentially beneficial to their own home gardens and farms in Pacific island countries. In an interview conducted in Honiara (Solomon Islands), one worker mentioned the value of seeing how irrigation was set up in Australia, how machines were maintained and used, and how weeds were managed (Solomon Islands Worker 14). Participants discussed technologies such as chainsaws, blowers (for pollination), water tanks, new seeds and materials to establish shade or hydroponic production that they had become accustomed to using in Australia, and wanted to use to support agriculture in their home countries.

Participants interviewed in Pacific island countries reflected on how they had prioritised changes in their use of technologies upon returning from Australia. For example, a worker from Efate (Vanuatu) indicated that the overarching greenhouse system she had seen in Australia was not relevant to her farm, but the priority water management concept she had observed being used in greenhouses was. Accordingly, she decided 'to build a water catchment system - [I used the SWP funds] to invest in a water well' (ni-Vanuatu Worker 2). Two other participants, one in Efate and one in Malaita (Solomon Islands), spoke of the funds earned during SWP participation being used to establish water tanks for water capture for home and garden use. We did not hear direct examples of SWP workers establishing irrigation systems in their homes (as opposed to water capture systems); however, some described irrigation techniques observed on Australian farms as interesting.

One Queensland employer explained that, because seasonal workers spend most of their non-work time at their on-farm accommodation, they have an opportunity to observe how Australian employers run their farms. This employer explained that, in their spare time, Solomon Islands workers were eager to learn about the irrigation setup. The employer said:

They're curious and it's not in their work time. Because there's all 6 of them and they're just sitting there on the ground watching [me] make connections on how to join it [irrigation pipes] and thread tape. And then [they were] wanting to take it off me and they wanted to do it. So, one of them, so he did it and I just taught him how to do it. So, and then we had a slight leak and then he wasn't happy with it so then he spent the next 2 hours pulling it apart, fixing it and fitting it back together. Working out why and giving him a few things to show him how to make it not leak. So, yeah, this is in their off [work] time. (Employer 4)

While exposure to technologies is of interest to workers, a major limitation is the cost and accessibility of these resources in their home countries, making it hard to adopt and transfer skills related to technology use. This is discussed further in Chapter 5.

Processing and marketing

Beyond food production, the wider parts of the value chain offer SWP workers an opportunity to learn about product quality, packing and marketing. Of the workers interviewed, 31% were involved in packaging activities while engaged in the SWP. Packing sheds in Australia can be large operations with multiple workers involved in sorting, packing and loading produce onto trucks. Participants identified product quality to meet consumer preferences as one thing they had learned during their time working in Australia. One participant from Vanuatu said they had 'learned harvesting skills of requirement for quality in the supermarket' (ni-Vanuatu Worker 1). A Tongan respondent, meanwhile, said that they learned 'how to harvest the orange according to customer need' (Tongan Worker 8). Another worker said that 'the technique of harvest [in Australia] is the best experience' to help Tongan growers because experience in the SWP taught him the value of 'push[ing] the high quality of packing here in Tonga' (Tongan Worker 9). Another said that 'even though the skills for packing is new to us, we share [with] each other during working to learn [from] each other and get a good result at work' (Tongan Worker 3). The workers noted the value of these practices for their home country, and explained that their farm practices have changed and that they are now packing 'crops to be hygienic' (Tongan Worker 5).

4.3 Cross-cultural learning

While our research questions and interview guides focused on agricultural skills and practices, workers also provided insights into other 'soft' skills they have learned via the SWP, including a deeper understanding of how time and labour is managed on Australian farms. The term 'time is time' was used by seasonal workers to explain the value of human work hours in Australian farm businesses. Time management that prioritised delivering on commercial contracts and working across a spectrum of weather conditions were identified as important aspects of Australian farm work. While employers valued the strength and ability of Pacific workers to complete physically difficult farm tasks, the workers emphasised their recognition of the importance of attendance, punctuality and meeting deadlines regardless of conditions.

These skills are important, as Western and Pacific islands cultures have different concepts and uses of time, and it is starting to be acknowledged by some employers and worker support groups that mutual learning about these differences is important on Australian farms where Pacific islands workers are employed. For example, the research team was provided a copy of the working document by an Australia-based seasonal worker support group, entitled 'Understanding Pacific Cultures: an introduction for those involved in employing Pacific islands workers in Australia'. The document devotes an entire section to cultural concepts of time, and explains to employers that, in many Pacific islands cultures, the concept of time 'is understood more in terms of 'readiness' rather than as the chronological time on the clock'. This means that Pacific islands workers work more towards the concept of 'timeliness' rather than strict monochronic framings of time, where specific things must be done following structured time and processes.

A beneficial combination of Western time management and the way of working on farms in the Pacific islands, usually as teams, was shown in our interviews. In Honiara (Solomon Islands) one worker said that overall they learn many skills via the SWP, such as ‘time management – [I now water] one mounds of potato each day before [leaving] home to do something in town’ (Solomon Islands Worker 16). In Efate, Vanuatu, another said that the ‘SWP experience has helped me with time management resulting in more of my effort going into [my] crop garden, vanilla and pepper’ (ni-Vanuatu Worker 6).

Relatedly, a relationship between employers and workers that is based on mutually beneficial learning about each other’s cultures was an important factor in creating inclusive work conditions that supported cohesion and understanding of each other’s skills and ways of working. Across 2 focus group discussions, 8 Solomon Islands workers spoke about their ability to work as a group, support each other during their time in Australia together and have a strong, trust-based relationship with their employer. When asked about what they thought the employer had learned from them, 3 people spoke about their employer respecting them as workers and respecting their culture. One worker said ‘[the employer has] learned to respect my culture’ (Solomon Islands Worker 1) and another also said ‘they have learned our culture – you know Solomon, sometimes we are not there on time. Island time!’ (Solomon Islands Worker 2). The third worker said that the employer ‘learned how I work here and my performance’ (Solomon Islands Worker 3).

The employer reiterated how important it is to understand where the workers came from and the benefits to their villages of hiring them. This employer actively sought to understand the cultural and socioeconomic context of the workers, and has developed a close relationship with the village and leaders in Solomon Islands. This has created a long-lasting legacy of trust between employer, worker and the workers’ immediate and communal family in Solomon Islands, allowing the same workers to return over multiple seasons. The employer has developed an inclusive work environment that supports the development needs of the workers when in Australia as well as financial planning for when they return home.

4.4 Conclusion

This chapter presented results on the extent to which different agricultural and value chain skills are acquired and applied by seasonal workers, both in Australia and upon their return to Pacific island countries. The main results from this chapter that are relevant to future agriculture-focused training and knowledge exchange opportunities via circular migration and labour mobility programs include:

- The differences between Australian and Pacific islands agriculture are perceived by workers as conditions that shape what they can learn through the SWP and then apply in their countries.
- Diverse examples from Solomon Islands, Tongan and ni-Vanuatu workers show how participating in the SWP has allowed them to experiment and try new things in their home countries.
- There is no clear difference between the 3 Pacific island countries in the extent to which skills developed in Australia are applied upon returning home.
- Cropping skills learned on Australian farms, related to planting and pruning, are most relevant to workers. Pruning and desuckering are directly transferable to their contexts and can be used for a range of Pacific islands agricultural systems and crops. Transferring these skills from Australia to Pacific island countries does not depend on the existence of the same crops in both locations.
- Soil and water management in large-scale Australian systems demonstrates to Pacific islands workers the importance of managing these resources for agricultural productivity. There are limits to the possibility of transferring such knowledge due to the prohibitive costs of some technologies.
- Workers are not fully exposed to the marketing side of Australian businesses, and they are aware of the market limitations in Pacific island countries.
- Seasonal workers share knowledge and skills acquired in Australia with their families and networks when they return home.



5 Barriers to knowledge exchange



5

Barriers to knowledge exchange

This chapter discusses the barriers that prevent knowledge and skills exchange through the SWP. The barriers that prevent sharing, acquiring and applying knowledge while in Australia under the SWP are described first. We then look at barriers that occur when SWP workers return to their home countries. We present the perspectives of Pacific islands SWP workers, then those of Australian SWP employers. Quotes from research participants are presented to highlight individual responses.

5.1 Perspectives of SWP workers

Barriers to knowledge exchange in Australia

This section outlines barriers identified by SWP workers that prevented agricultural knowledge and skills exchange while they were in Australia:

- barriers between SWP workers and Australian farmers and farm managers
- barriers between SWP workers and other Pacific islanders in Australia
- other barriers.

Barriers between SWP workers and Australian farmers and farm managers

In addition to exploring how agricultural knowledge and skills were obtained by SWP workers during time spent on Australian farms, this study was also open to finding evidence of the reverse – that is, examples of SWP workers offering their knowledge and skills to Australian farmers. There is clear potential for this to occur, given almost all (95%) of the workers interviewed as part of this study were experienced subsistence or smallholder farmers in Pacific island countries. We further note that, in an era of climate change, smallholder farmers are uniquely positioned to be at the forefront of global sustainable agricultural transformation (IFAD and UNEP 2013), bringing valuable knowledge and experience of facing the impacts of global environmental change. This can be highly valuable for Australian farming systems.

Despite 60 SWP workers being experienced subsistence or smallholder farmers, only 15 (25%) of them mentioned they had exchanged farming knowledge with their Australian farm employers. Sometimes the large scale of the Australian farms meant that there was limited opportunity for workers to meet with their Australian farm owners (Box 2 in Chapter 4 is an exception – the majority of SWP workers in Australia work on large-scale farms (Curtain and Howes 2020)). A ni-Vanuatu worker stated that 'owners are not present[t] at the

spot [where we work], only workers and supervisors' (ni-Vanuatu Worker 3). Another worker explained that they only interact with their supervisors, not farm owners (Solomon Islands Worker 1). This reduces the opportunities for SWP workers to share information and build relationships directly with Australian farmers, in addition to the possible language and cultural barriers that may be present. Power relations between employees and employers may also mean that SWP workers are hesitant to make suggestions about farming practices to their supervisors. As one ni-Vanuatu worker said: 'No way, we look up to them as our bosses' (ni-Vanuatu Worker 7). Other workers did not see talking to the employer as part of their role, stating, 'I see them [employers] as people with higher skills and knowledge' (ni-Vanuatu Worker 2).

There was also a tendency among workers to dismiss their own agricultural knowledge entirely or believe that their agricultural expertise was of limited value to Australian employers. Despite growing food and raising livestock on one acre of land in Tonga, one worker stated, 'I do not have any farming skills to share [with] the Australians' (Tongan Worker 5). Another explained, 'No, I learn many things when I was arrived to Australia, not in Tonga. Means all skills and knowledge that I have now is from Australia' (Tongan Worker 15).

Furthermore, SWP workers framed their Australian employers or Australian ways of farming as being more advanced, and therefore considered it unlikely that farming practices from Pacific island countries could be beneficial for Australian farms. For example, one Tongan worker said he had not shared any knowledge 'because Australia is more advanced than Tonga in farming knowledge' (Tongan Worker 15), and a ni-Vanuatu worker explained, 'Australian farms have moved away from what we are doing today [in the Pacific

islands] many, many years ago. They have moved forward so we are still far behind' (ni-Vanuatu Worker 7). In other cases, workers did not share their knowledge because they recognised that Australian farmers were likely to consider themselves more advanced than their Pacific islands counterparts. For instance, a worker from Vanuatu concluded that 'advanced' societies expect others to follow their trajectory: 'Aussies think they are more advance[d] than us. So they expect us to follow their way of farming' (ni-Vanuatu Worker 5). This further prevents sharing of knowledge from Pacific islands farmers to Australian farmers and farm managers as part of the SWP.

Other research participants (39%) articulated the difference between Australian and Pacific islands ways of growing food by answering 'No' when specifically asked whether they could see areas where Australian farms could benefit from Pacific island countries' way of growing food. However, some workers believed that 'the Pacific way of growing food is best [because it is organic], but the Australian way uses [synthetic] chemicals' (ni-Vanuatu Worker 6). This points to discernment and critique among some SWP participants about so-called 'advanced' farming systems operating in Australia and signals potential opportunities that could arise if SWP workers are connected with Australian farms that do not rely on (or wish to reduce their reliance on) synthetic chemical inputs. Nonetheless, the barriers presented above indicate that there are opportunities to improve how Australian farmers listen and work with the Pacific islanders' ways of knowing and farming, as well as potentially changing the narrative of SWP workers as 'unskilled labourers' to one that acknowledges their existing agricultural knowledge (see also Dun et al. 2018; Klocker et al. 2020).

Barriers between SWP workers and other Pacific islanders in Australia

While some SWP workers mentioned sharing knowledge with other Pacific islanders while in Australia (see 6.1: Perspectives of SWP workers), it was usually in the context of their experiences on Australian farms rather than agricultural practices in their home countries. As one worker explained: 'we mainly talked about our tasks and responsibilities in the Australian farms. We don't talk about our home country experiences of farming' (ni-Vanuatu Worker 7). Whether Pacific islanders would want to talk and share knowledge about their Pacific islands farming experiences while in Australia requires more in-depth research investigation and could be a factor of having limited time for discussion during work hours. In some cases, workers explained that they only interact with others from their own country while they are employed on Australian farms, which further inhibits knowledge exchange across Pacific islands farming communities as part of the SWP.

Other barriers

Administrative barriers in Australia also prevented SWP workers who participated in this study from gaining skills they had hoped to acquire while in Australia, such as obtaining licences to drive farm vehicles and accessing training to operate forklifts or tractors. One participant noted:

[We would like to learn] forklift, tractor but getting licence is one of the problems because we don't know how to go about how to get our licence ... When we go back to Solomons and there is a company there, they need someone to work on those machines. (Solomon Islands Worker 25)

SWP workers expressed that a tendency to be restricted to certain roles on farms in Australia, limited their capacity to learn because of a lack of exposure across all value chain elements (production, processing and marketing). This included repeat roles on only one type of crop.

[We] spend too much time in the field, we don't get to work in other techniques. For example, not just spending time in the farm field but [we want to] move to other section[s] [such as] plant nursery, fruit trees/ orchard, seed saving, packaging and marketing. (Solomon Islands Worker 1)

[F]or workers entirely working on [the] farm [we should] have [a] chance to work in [the] pack house as well, to experience the sorting and packaging (ni-Vanuatu Worker 2)

In all [my] time in Australia I have worked mainly on banana farm[s]. I would like to work on other crops such as tomato to gain skills in tomato farming. (ni-Vanuatu Worker 7)

Only working on one part of the farm or farm system, or with only one crop, during their SWP tenure in Australia prevented workers from developing a holistic perspective of the full farm system, such as marketing or product quality testing. They identified this as a limitation of the knowledge exchange potential of the SWP.

Barriers to knowledge exchange after returning to Pacific island countries

As shown in Chapter 4, SWP workers recognised they were learning new farming knowledge and skills in Australia that they could apply in their Pacific island countries. This section outlines barriers identified by SWP workers that make it difficult for them to apply and share their new knowledge with fellow Pacific islanders upon their return home:

- barriers preventing workers from applying agricultural knowledge acquired in Australia to their Pacific island countries
- barriers preventing workers from exchanging knowledge with other Pacific islanders
- other barriers.

Barriers preventing workers from applying agricultural knowledge acquired in Australia to their Pacific island countries

As mentioned in Chapter 4, 46% of participants had applied knowledge or skills learned in Australia in their home countries. However, among those who did not provide concrete examples, actual and perceived challenges were identified. These are outlined in Table 6.

Even for the 6 study participants from Solomon Islands who were working on certified organic farms in Australia as part of the SWP, their ability to apply farming practices to Pacific island countries was still limited (despite the fact that Pacific islands agriculture is predominantly organic). Relatively low-technology methods for weed management and biological control of insect pests were being used on the Australian organic farm. However, as the story in Box 4 shows, limited access to relevant materials, finance, knowledge and agricultural extension prevented the workers from

implementing such practices upon their return to Solomon Islands.

The example in Box 4 shows that even when workers engage in farming practices in Australia that do not use advanced technology (such as hydroponic growing or synthetic chemicals), facilitation and extension support are still necessary to apply those techniques on workers' own farms. Despite the barriers outlined in this section, the results presented in Chapter 4 showed that many SWP workers are finding opportunities to transfer knowledge and skills acquired in Australia to their home contexts in Pacific island countries. Taken together, this evidence of opportunities (Chapter 4) and barriers (Chapter 5) suggests that knowledge transfer through the SWP is possible, but that such opportunities could be maximised with greater support (as discussed in Chapter 6).

Barriers preventing workers from exchanging knowledge with other Pacific islanders

In terms of SWP workers sharing new knowledge and skills gained in Australia with fellow Pacific islanders upon returning home, some (but very few) SWP participants simply did not want to share their newly acquired knowledge. Others stated that they had not shared knowledge because 'no-one asked for [it]' (ni-Vanuatu Worker 3), suggesting that other people are not interested and/or opportunities for knowledge exchanges might need to be facilitated. Neighbouring villagers not asking returned SWP workers about new knowledge acquired might also be a case of people needing to witness new knowledge applied in practice before their interest is sparked (Dun et al. submitted). Certainly, data presented in Chapter 4 shows some returned SWP workers do share knowledge with others upon return home, leading to the diffusion of some agricultural skills from Australia to Pacific island countries (for example, pruning).

Table 6 Barriers to knowledge exchange identified by SWP workers

Agrifood systems value chain activity	Actual or perceived barriers	Quotes
Production – crop type	<ul style="list-style-type: none"> • Not seeing the applicability of work experience in Australia to the Pacific islands, because of the differences in the crops grown 	<p><i>Cannot plant berries and apply skills because we don't have them in Vanuatu. (ni-Vanuatu Worker 4)</i></p> <p><i>No, Because different orange[s] in Tonga from Australia. And orange[s] around my plantation is not for sale it's for family need only. (Tongan Worker 15)</i></p>
Production – planting	<ul style="list-style-type: none"> • Australian farming systems being perceived as too advanced, expensive, complicated and different, and no similar large-scale systems being present in the Pacific islands • Not having the necessary land, tools and/or equipment to implement Australian farming practices in the Pacific islands (and the prohibitive expense of acquiring these) 	<p><i>[I am] following the idea of planting in Australia but in a much smaller scale. [But in Australia there is] commercial farm – [in Solomon Islands there is] small garden in backyard so hard to apply the techniques learned. (Solomon Islands Worker 3)</i></p>
Production – crop management	<ul style="list-style-type: none"> • Not having the necessary land, tools and/or equipment to implement Australian farming practices in the Pacific islands (and the prohibitive expense of acquiring these) 	<p><i>[In] Tonga the chemical is expensive. The most chemical you want to do it right, is expensive ... Can't plant bananas like they do in Australia because [I] don't have the equipment or chemicals ... Equipment is available in Tonga but you have to hire. But it's expensive because you have to pay for it by the hour. The contract for one hour is A\$100. The equipment is too expensive for us to buy and start a business because we would have to work for 5 years and not send any money to family. It's A\$20,000 to buy the machinery in Tonga. We can buy it cheaper in Australia for maybe A\$10,000–15,000 but if we take it we have to pay when it arrives in Tonga. (Tongan Worker 22)</i></p>
Marketing – export	<ul style="list-style-type: none"> • Australian farming systems being perceived as too advanced, expensive, complicated and different, and no similar large-scale systems being present in the Pacific islands 	<p><i>[I'm] not really learning anything in Australia that could help with family cassava exporting business because [I'm] only really exporting to family in Melbourne in Australia. It's not the same type of commercial business as the banana farms I am working on in Australia. (Tongan Worker 24)</i></p>

Table 6 Barriers to knowledge exchange identified by SWP workers (continued)

Agrifood systems value chain activity	Actual or perceived barriers	Quotes
Marketing – domestic	<ul style="list-style-type: none"> • Not having the necessary market (physical venue and/or potential buyers) in the Pacific islands where workers could grow and sell a larger volume of produce 	<p><i>I can plant more bananas here in Vanuatu but there is no market to sell to. There will be no money on banana if I plant on a larger scale unless there is a market. (ni-Vanuatu Worker 7) (Note: this worker grows bananas in Vanuatu and worked on a banana farm in Australia.)</i></p> <p><i>Even if we farm in Malaita, we must bring our food to Honiara to sell ... in the central market ... [which is] easy but you spend your money to cart and ship fares ... from Auki we can go by boat to Honiara, takes 5 hours as well. (Solomon Islands Workers 25 and 26)</i></p> <p><i>[I] need to travel 2 days for the Honiara market ... and pay SBD\$100 [just to be able to sell the produce]. (Solomon Islands Worker 18)</i></p>
Absence of relevant value chain elements (production, processing and marketing)	<ul style="list-style-type: none"> • Australian farming systems being perceived as too advanced, expensive, complicated and different, and no similar large-scale systems being present in the Pacific islands • Not having the necessary land, tools and/or equipment to implement Australian farming practices in the Pacific islands (and the prohibitive expense of acquiring these) • Not having acquired sufficient knowledge to implement Australian farming practices upon returning to the Pacific islands 	<p><i>No establishment [no grape farm in Solomon Islands] to continue the training and applying the skills. (Solomon Islands Worker 6)</i></p> <p><i>[My land] area too small to make gardening ... No farm, no tractor, no knowledge of nursery ... and no equipment/tools. (Solomon Islands Worker 5)</i></p>

Box 4: Barriers that prevented SWP workers from applying organic farming knowledge gained in Australia to Solomon Islands

A group of 6 Solomon Islands workers, originally from Malaita and Western provinces but living in Honiara, were interviewed at their workplace, a large-scale (1,000 acre) certified organic fruit, vegetable and livestock farm in Queensland. All were experienced farmers, growing crops (bok choy, cabbage, cassava, chilli, coconut, potatoes, taro, and tomatoes) in home gardens and on plantation land in Solomon Islands. On the Queensland farm, they were learning about natural processes and predation methods for insect pest control and low-technology methods for weed control. Both these methods avoided the use of synthetic chemicals in farming practices. While potentially applicable to their Solomon Islands contexts, knowledge and financial barriers prevented these workers from applying these newly learned practices upon returning home, despite their interest in doing so.

To control insect pests on his crops, the Australian farmer (Employer 4) brings in beneficial insects to control unwanted insects (for example, parasitic wasps to control white flies, and lady beetles to control thrips). This involves engaging an entomologist who advises on the type of insects needed and then 'physically sprinkle[s] the insects where we want them throughout the field' (Employer 4). The Solomon Islands' workers had observed this pest control method on the Queensland farm and were interested to learn more and apply it as a practice on their own crops in Solomon Islands. However, they do not have the necessary knowledge to do so, despite having relevant beneficial insects in Solomon Islands, as one worker explained:

[Employer 4] don't use chemical, just use buying ladybirds to kill the bad insects. But we have many ladybirds [in Solomon Islands], but we don't know the use of them. So when I see I ask [Employer 4] and [Employer 4] say 'this one to kill different insects' and [I thought] 'Oh okay, I'll keep it, I got plenty [of ladybirds] in Solomons' ... but we don't know the use and we just say 'ah just the insect'. (Solomon Islands Worker 26)

To control weeds on his farm, Employer 4 uses plastic-sheet mulch around his crops to suppress weed growth instead of applying synthetic chemicals to kill weeds. The Solomon Islands' workers explained that the plastic is left on the ground until all the relevant crops are harvested. They had learned that:

Laying the plastic on the row make not much weeds [to] disturbing the plants ... maybe better than weeding the whole month ... the plastic makes the soil moist and it blocks the weed [so it's better than using newspaper]. (Solomon Islands Worker 30)

Despite seeing the benefits of this method of weed control, the workers said they were unable to apply this technique in Solomon Islands. The financial expense of purchasing the relevant plastic made this prohibitive as well as a lack of availability of that particular type of plastic in Solomon Islands.

Other barriers

Beyond the practical challenges highlighted above, another relevant barrier to knowledge and skills exchange is simply whether those participating in the SWP are themselves interested in investing in agriculture in their Pacific islands home countries. As one ni-Vanuatu worker said, their farming activities had not changed since participating in the SWP 'because scale of farming is too big compare to mine. Also, before I went to Australia to work, I have a plan to build house, not invest in agriculture' (ni-Vanuatu Worker 5). A Tongan worker, meanwhile, explained they were not investing in agriculture, saying that 'my purpose of joining the SWP is for children's school fees and family/church function' (Tongan Worker 5). The majority of Pacific islanders who participate in the SWP want to support their families and livelihoods, so using SWP earnings to invest in agriculture may not be their priority. Previous studies about the SWP consistently show that most SWP participants tend to invest in their housing, children's education, family's health and small business ventures (for example, a grocery shop or establishing a taxi service) (Commonwealth of Australia 2016; World Bank 2018; Connell and Petrou 2019). However, some workers are interested in making investments in agriculture (be it financial or learning new practices and relevant knowledge) as part of their SWP participation, as we show in Chapter 4 and discuss further in Chapter 6.

For other workers, a barrier to implementing changes to their farming or food growing practices in the Pacific islands is their own physical absence from their land during time spent in Australia. Workers commonly engage family members to tend their land and crops while they are in Australia, or use their earnings to hire farm labour. Some, however, do not have anybody to look after their land or farm during their absence. For example,

2 Tongan workers explained, that 'Yes' their farming had changed since spending time in Australia under the SWP but that the change was 'negligence, [because] there is no-one looking after my plantation while I'm in Australia' (Tongan Workers 8 and 10). This issue has also been highlighted in other studies of Pacific labour mobility (Connell and Petrou 2019).

Finally, there are aspects of the way the SWP is governed and administered that can impinge on workers' plans to achieve their goals. These governance aspects can impact differentially on their employment experience, earnings and ability to sufficiently implement their plans upon returning home. Here we highlight factors mentioned by workers we interviewed, and note that many overlap with findings from other SWP research. Such studies have identified, among others, issues with underpayment, unsafe working conditions and other problems as problematic aspects of the SWP (Connell and Petrou 2019). Some of the workers interviewed in this study spoke of experiencing mistreatment by on-farm supervisors in Australia (not necessarily the Australian farmer) and issues that affect their SWP earnings, including:

- not claiming or receiving as much Australian superannuation as anticipated
- large deductions for expenses taken by recruitment agents
- not receiving pay if sick or when not working because of inclement weather
- high exchange rate fees
- extra expenses and complexity involved in returning home during COVID-19 pandemic conditions.

The main way workers can pursue their goals from SWP participation is through their Australian dollar employment earnings which, once translated into their local financial currency, amount to relatively large financial gains in Pacific island countries. These gains can then be invested. If there are factors affecting their earnings, this can negatively impact their capacity to carry out their plans upon returning home to the Pacific islands, whether agricultural or otherwise.

5.2 Perspectives of Australian employers

Barriers at the farm scale

We asked employers if they thought agricultural knowledge gained by SWP workers on Australian farms could be transferred to Pacific islands farms and, vice versa, if SWP workers had any agricultural knowledge they could bring and apply to Australian farms. Overall, employers' insights suggested that there are barriers to this knowledge exchange. First, the working and farming context in Australia is such that the scale of commercial farm production and technology involved is often too different for SWP workers' pre-existing knowledge to be applicable to Australian farms, and for translation to Pacific islands farming contexts. Second, there is an absence of support and interventions to enable knowledge to be 'translated' across the differing Australian and Pacific islands farming contexts.

For example, when asked whether SWP workers have any agricultural knowledge that could be applicable on their family's banana farm, Employer 3 acknowledged the rural farming background of ni-Vanuatu workers is valuable to Australian farms. However, this was not so much about the workers' farming knowledge (which was quickly dismissed), but their work ethic, emotional resilience and physical abilities:

We target people [from the outer islands of Vanuatu] that grow crops but it isn't necessarily their gardening experience that we're looking for. It's their lack of influence over the bright lights of town more so. And we find that they're better suited to farm work. Not because they've been doing the farming, because farm work is a necessary part of their survival and ... we find that they're a better temperament and better suited to the nuances of banana farming because it isn't for the faint-hearted ... we find that they are a lot less Westernised. And their farming skills and their farming background is actually more transferrable in relation to what we need, than the people that have been in the major cities for a long period of time. (Employer 3)

The conversation with Employer 3 demonstrated they had clearly learned aspects of the different farming and land management practices on Pacific islands farms from SWP workers from Vanuatu. However, they did not feel that these could be applicable on Australian banana farms: 'To be able to say that it's [Pacific island farming knowledge] transferrable, I don't think for banana farming, is completely relevant because we farm at such a large scale ... It's just a totally different scale.'

Thinking about knowledge transfers in the opposite direction, Employer 2 acknowledged that the scale of banana farming that SWP workers learn about in Australia is probably not applicable to Pacific islands farming contexts: ‘some of the things that they [are] probably learning here, unless you’re going to export to Woolworths, might not be the best thing for them to be learning’.

Although the employers interviewed did not always see agricultural knowledge as being transferable (from Pacific island countries to Australia, and vice versa), they did recognise that some aspects of farming that were being experienced by SWP workers on Australian farms was relatable to a Pacific islands context. However, a barrier exists due to the lack of dedicated personnel who can translate techniques that are transferrable to Pacific islands workers. Employer 3 stated, ‘I think that there is some basic farming techniques that are transferrable’ but pointed out that the farmers themselves do not have time to teach and explain how things work to the workers. Using the example of water pumps used on Australian banana farms as a transferable technique and technology that could be used on Pacific islands farms, Employer 3 explained:

But the farmer doesn’t go ‘Oh you need to do this, because this works this and this works this and that’s the way that it all happens’. A farmer just goes ‘Just turn that on. Go turn on the pumps.’ You know, he doesn’t have time [to explain how the technology works]. (Employer 3)

Employer 3 suggested that some interventions and training support were needed to translate the skills and technology learned on Australian farms into a Pacific islands context:

So I think they see our farming and probably see that as a dream that’s unachievable...[but] the skills and the technology we have is [relatable]. I don’t think they understand how relatable it is. They haven’t had, I think they need something like [what] the RSE [scheme is doing]² ... Just there’s a significant gap and you can’t just make the skills translatable. The skills aren’t being translated. And I see that the RSE’s probably been better at doing that than what we’ve been doing in Australia. (Employer 3)

We discuss New Zealand’s RSE in more detail in Chapter 6. Employer 2 also pointed out that SWP workers are not fully informed about the financial reality and pressures of farming in the Australian context:

So many of them [Australian farmers] are in millions and millions of dollars’ worth of debt and they [the workers] don’t counter that in ... the Western world looks like it’s extremely wealthy, but it’s a house of cards ... It’s not that we’re wealthy, we have access to debt that I don’t think exists in the Pacific ... I think that’s something, they [the SWP workers] don’t understand. (Employer 2)

2 The RSE scheme has an established training program called Vakameasina. Vakameasina (‘treasures we carry together’) is an education and development program for seasonal horticultural workers that incorporates training in diverse areas including English literacy, numeracy, financial and digital skills, and general life skills to help workers from Pacific island countries prepare for life in New Zealand. More information is available at www.vakameasina.co.nz/about.html.

Employer 2 reflected that this lack of understanding can falsely influence workers' perceptions of the benefits of a Western style of farming. Employer 2 did not think information about how the scale of farming in Australia is made possible (via Australian farmers or agribusinesses' access to finance) forms a component of workers' pre-departure briefings about working on Australian farms. Again, this points to a gap in how knowledge is translated and understood across the differing Australian and Pacific islands farming contexts.

Administrative and regulatory burdens

While conducting interviews about agricultural knowledge and skills exchange possibilities through the SWP, a number of issues relating to the broader operation of the SWP emerged. We will briefly highlight some of the issues raised, as they provide broader context that has the potential to influence how opportunities for agricultural knowledge and skills exchange take place in labour mobility schemes, especially those that might involve small-scale Australian farms.

The impact of the ever-increasing administrative burdens and responsibilities of being an Approved Employer under the SWP were front and centre in our interviews. Employer 1 commented that 'labour mobility programs ... are highly overregulated'. Employer 2, meanwhile, had very clear frustrations about the program, its expectations of employers, its lack of full cultural briefing, its lack of support and communication from the administering government department and the burden it had placed on Employer 2's health.

You know, they made me an Approved Employer, I wrote a nice little essay about how we thought we were going to do it. [The government department administering the SWP didn't ask] 'Have you ever done it before? [Are you] expert[s] in bringing people from another country?' and making sure we understood what was going on. The gaps were horrendous! (Employer 2)

To carry out their responsibilities to workers under the SWP, Employer 2 was effectively accessible to their SWP workers by phone 24/7. This commitment to their workers and duties under the SWP, and the burden the SWP had become, meant that Employer 2 was considering withdrawing from the program because it had become untenable, leading to burnout.

Employer 3 agreed, and pointed to the increasing risk of losing small-scale Australian farmers as direct employers under the SWP because of the ever-increasing regulatory requirements of the program. The regulatory aspects of managing employees under the SWP come on top of all the regular and mounting farm regulations and food quality standards that Australian farmers have to abide by in Australia. Employer 3 suggested that, at some point, managing these multiple administrative and regulatory requirements will become untenable for small-scale farmers under the SWP.

I do think that the program has got such a life of its own, that we are now getting into the territory that the cost burden is becoming so great that there are only going to be a few large labour hire companies that are going to be able to operate this program in the future and the outcomes for the workers are not going to be as good. Because you basically need somebody that's sitting at the computer 24/7 to actually manage the program and the program requirements. The administrative burden is ridiculously high. And getting higher ... there needs to be at least some kind of recognition of the regulatory burden that's being put on the farmers as part of this [Seasonal Worker] program if you want to stop farmers leaving the program because they just can't handle the amount of regulation. (Employer 3)

We discussed the option of smaller-scale farmers turning to hiring their SWP workers via labour hire companies instead of employing them directly. However, Employer 3 (who is both a direct employer under the SWP for the family's banana farm and who had recently started a labour hire company) explained that this adds an additional cost burden for smaller-scale farms. For each worker that a small-scale farmer engages under the SWP, and for each hour of work that worker performs, a labour hire company will charge the farmer an additional hourly fee to administer employment arrangements.

Employer 3 explained that small-scale farmers who hire SWP workers via labour hire firms might place additional performance expectations on SWP workers. This is because SWP workers hired via labour hire firms cost the small-scale farmer more per hour compared to another worker on their farm (for example, a backpacker or local worker) who is hired directly. Eventually this cost burden on the smaller-scale farms may preclude some of them from engaging workers via SWP altogether, meaning that more SWP workers end up being employed on large-scale commercial farms. Ultimately, Employer 3 concluded 'I do think that by creating the regulatory framework that we've done, we're losing some of the benefits of the program. Because the benefits of the program are a direct farmer-employee relationship.'

These experiences relayed by employers are not specific to agricultural knowledge and skills exchange. However, they are noteworthy because they point to the risk of SWP workers potentially losing opportunities to work on smaller-scale farms in Australia and to be able to form professional relationships directly with Australian farmers. As Chapter 6 shows, it is direct relationships with smaller-scale Australian farmers that create some unique opportunities for agricultural knowledge exchange.

5.3 Conclusion

This chapter highlighted multiple barriers for agricultural knowledge exchange through the SWP that were identified from interviews with workers and employers.

These include:

- lack of Pacific islands farming knowledge being shared with Australian farmers and farm managers
- SWP workers dismissing the value of their own farming knowledge
- lack of opportunities to share farming knowledge between SWP workers from different Pacific island countries while in Australia
- SWP workers' lack of knowledge and/or opportunities about how to obtain formal skills while in Australia
- SWP workers only working on one part of a farm or farm system and being unable to learn about different aspects of the farm system and develop a holistic perspective of Australian agriculture.
- SWP workers not seeing the applicability of work experience in Australia to Pacific island countries, given different crops.
- Australian farming systems perceived as too advanced, expensive, complicated and different, and no similar large-scale systems in Pacific island countries
- not having the necessary market in Pacific island countries for workers to grow and sell more produce
- SWP workers not having the necessary land, tools and/or equipment to implement Australian farming practices in Pacific island countries
- SWP workers not having acquired sufficient knowledge to implement Australian farming practices upon returning to Pacific island countries
- some SWP workers' lack of willingness to share acquired knowledge with other Pacific islanders upon their return home
- SWP workers having non-agricultural priorities and goals for SWP earnings
- aspects of SWP administration that impact on workers' earnings and their ability to carry out plans, including agricultural plans
- the large scale of commercial farm production in Australia and the technology involved being too different for the pre-existing knowledge of SWP workers to be applicable to Australian farms
- SWP employers perceiving the large scale of commercial farm production in Australia and the technology involved as being too different to be translatable to the Pacific islands farming context
- an absence of support, personnel and interventions to enable knowledge to be 'translated' across the different Australian and Pacific islands farming contexts
- increasing administrative and regulatory burdens on SWP employers potentially limiting the opportunities for workers on small-scale Australian farms, where workers can form direct professional relationships with Australian farmers.

While several barriers have been outlined in this chapter, and in Chapter 4, the results of this study suggest SWP workers are already transferring knowledge of their own accord, despite these limitations. Chapter 6 discusses opportunities for additional supports and structures to overcome some of the barriers highlighted in this chapter. Such supports would help employers and workers to make the most of the SWP's potential to contribute to the transfer of agricultural knowledge and skills, and contribute to potential development and food security benefits in Pacific island countries.

6 Opportunities for knowledge exchange



Photo: Corcoran Ashleigh

6

Opportunities for knowledge exchange

This chapter presents findings regarding untapped opportunities for knowledge and skills exchange to be better supported through the SWP. We present the perspectives of Pacific islands SWP workers, then those of Australian SWP employers. Quotes from research participants are presented to highlight individual responses.

6.1 Perspectives of SWP workers

The SWP workers we interviewed expressed an interest in being able to learn different types of farming knowledge while engaged in the SWP. Approximately 70% of the workers identified something they find interesting that Australian farmers do and two-thirds identified a concrete way in which the SWP could help them develop their farming knowledge and skills. In this section, we outline the learning interests of SWP workers, and discuss their suggestions for activities, infrastructure, resources or training that could help support their agricultural endeavours and ambitions in Pacific island countries. This shows that SWP workers want to do more than earn money through their SWP participation. Indeed, many workers identified potential opportunities for Australian or Pacific islands interventions (formal and informal, supported by government or community) to support agricultural knowledge and skills exchange through the SWP.

Knowledge and skills

Besides broad exposure to different crops and stages of farming, SWP workers also identified specific skills or farm practices they were interested in learning. These ranged from specific skills in crop growing (for example, soil preparation and management, water management, weed management, use and application of synthetic chemicals and plant hormones, plant grafting techniques, harvesting techniques, greenhouse production, nursery production and operating farm machinery) through to processing and marketing aspects of the farm business (for example, produce selection, packaging techniques and market access). Table 7 summarises these using quotes from worker interviews.

Table 7 Knowledge and skills that SWP workers want

Agrifood systems value chain activity	Quotes
Production – land and water management	<p><i>[I would like] help in soil management. (Tongan Worker 10)</i> <i>[It was interesting to see] water management – drip irrigation, a way not to waste water. (ni-Vanuatu Worker 1)</i></p>
Production – growing techniques	<p><i>[I would like to learn] pruning, crop selection and many more things around the farm. Proper explanation of harvesting techniques to avoid over harvesting, over ripe crops... (Solomon Islands Worker 15)</i> <i>[An interesting thing seen that Australian farmers do] Everything is done by machine and technology for harvesting, weeding, applying of fertiliser. (Solomon Islands Worker 15)</i> <i>[It is interesting to see Australian farmers] planting in glasshouses – [this] idea is good because plants are protected from sun heat. (ni-Vanuatu Worker 4)</i> <i>[I] would like to learn ... The nursery area, big nursery, controlled watering system – managing water as well as supplying sufficient water for the plants to grow healthy. The use of technology, watering system, beds and greenhouse to house the seedlings. (Solomon Islands Worker 1)</i> <i>[I would like to learn] the process on how to nursery the plants, different harvesting techniques ... How to plough the soil before planting ... proper planting techniques, weeding. (Solomon Islands Worker 5)</i> <i>[I would like to learn] application of chemical training. Ministry of Agriculture or Growers Federation of Tonga [could be] the trainers. (Tongan Worker 8)</i> <i>[I would like] training] to use fertiliser and the right amount. Pesticide use. At least the first week [of SWP placement] should visit nearby farms and train them. Learn about the whole process of production – work in the pack shed, and learn to plough the ground. (Solomon Islands Worker 2)</i> <i>[I would like] training on the use of chemicals – like fertiliser application, pesticides application and fruit hormones ... grafting for short [early] bearing ... The use of chemicals like fertilisers ... Provide more training on agriculture – chemical mixing, spraying, ratio and method. (Solomon Islands Worker 9)</i> <i>[I am] interested how to maintain the height of the fruit trees. Very short easy to harvest ... Learning to plant pumpkin and watermelon. Total different techniques ... Teach them how the irrigation system works – I want to know how to irrigate my farm. (Solomon Islands Worker 10)</i></p>

Table 7 Knowledge and skills that SWP workers want (continued)

Agrifood systems value chain activity	Quotes
Production – machinery	<p><i>[I] would like to learn how to operate and drive the machines like ploughing using the tractor and harvesting. (Solomon Islands Worker 1)</i></p> <p><i>[I] would like to learn about many things from] use of tractor machines for rowing, to laying of weed mat, to laying of water irrigation and to use fertiliser in the right amount and ratio. (Solomon Islands Worker 3)</i></p>
Processing and marketing	<p><i>Training in packaging [should be done by] Ministry of Agriculture and also Growers Federation of Tonga. (Tongan Worker 3)</i></p> <p><i>[I] would like to learn] Packing and marketing ... [Interviewer: Could the SWP help?] Yes, to extended training us [female workers] on packing. (Tongan Worker 5)</i></p> <p><i>[I find] packing and marketing [interesting] ... Yes, [I would like] to have more time on training SWP workers for harvesting and packing. (Tongan Worker 13)</i></p> <p><i>Training in every pathway of vegetables and fruit to the market. [Training should be done by] Ministry of Agriculture in Tonga and Agriculture sector in Tonga. (Tongan Worker 5)</i></p> <p><i>[I would like to learn] licence – learning to drive the tractor and use the forklift when loading/unloading. (Solomon Islands Worker 7)</i></p> <p><i>[I would like] more time learning nursery skills, fruit selection in packing shed. (Solomon Islands Worker 13)</i></p>



Photo: Conor Ashleigh

Insights and suggestions

The workers interviewed provided a range of ideas about what support is needed to help them pursue their agricultural endeavours and livelihoods in the Pacific islands. These suggestions for support ranged from activities that could be implemented across different, or all, phases of SWP participation from the recruitment stage, pre-departure stage, in-Australia stage and through to their return home to the Pacific islands. Suggestions for who they thought should or could provide the relevant suggested support included government ministries, Australian employers, agricultural training organisations, farmer organisation networks and private companies.

Table 8 provides details on the range of suggestions from workers. The workers' suggestions also underscore how international circular labour mobility is uniquely placed to support agriculture in workers' countries of origin if relevant structural support is provided and adequately resourced.

Table 8 Training and infrastructure suggestions from SWP workers

Suggestion	Suggested provider	Relevant SWP phase	Quotes
<p>Training</p> <p>Implement better strategic planning around worker recruitment. Those who are recruited should have relevant abilities and come from rural areas and agricultural training centres to ensure SWP participants are well placed to engage in knowledge and skills development.</p>	<ul style="list-style-type: none"> Pacific islands national governments (relevant Ministries implementing the SWP) 	<ul style="list-style-type: none"> Recruitment 	<p><i>Identify the ability of each person and train them, visit farms around before going over and do recruitment in rural areas/ Rural Training Centre schools, not recruit [those] who live in the city. They know nothing about farming unlike those in rural areas. (Solomon Islands Worker 7)</i></p>
<p>Improve training support and practical experience for new SWP workers to better equip them with the knowledge and skills required for work on large-scale Australian industrial farms, to minimise the shock of working in a different farm system.</p>	<ul style="list-style-type: none"> Australian Government (relevant departments implementing the SWP). Pacific islands national governments (relevant Ministries implementing the SWP) 	<ul style="list-style-type: none"> Pre-departure In-Australia 	<p><i>[Before departure to Australia, do] group training at Taiwanese Farm [Taiwanese Technical Mission larger scale farm in Honiara, Solomon Islands]. Train on how to nursery, farm rules and safety training. Livestock training [too]. Meat workers have no knowledge before going over for seasonal work about how and what to do. (Solomon Islands Worker 3)</i></p> <p><i>[When we are in Australia, the SWP could support farming skills and knowledge by having an] SWP Trainer on packing to attend during the processing of packing – for [initial] 2 weeks during the training, before we do the packing on our own. (Tongan Worker 7)</i></p>
<p>Provide training in agricultural skills and techniques while on-farm in Australia, delivered by qualified trainers.</p>	<ul style="list-style-type: none"> Australian farmers/ employers. Australian Government (relevant departments implementing the SWP) Pacific islands national governments (relevant Ministries implementing the SWP) 	<ul style="list-style-type: none"> In-Australia 	<p><i>Upgrade knowledge in horticulture, further study in agriculture. (Solomon Islands Worker 14)</i></p> <p><i>SWPs should follow the right processes and channels. Farmers should teach them properly the skills, such as machinery on the farms ... Proper planting techniques for good yield ... Young future SWP [workers] should learn a lot over in Australia and apply the skills at home. (Solomon Islands Worker 16)</i></p>

Table 8 Training and infrastructure suggestions from SWP workers (continued)

Suggestion	Suggested provider	Relevant SWP phase	Quotes
<p>Train SWP workers to apply agricultural knowledge and skills acquired in Australia to their own Pacific islands farming contexts in a contextually relevant manner.</p>	<ul style="list-style-type: none"> Pacific islands national governments (relevant Agricultural ministry) Stakeholders in the relevant Pacific islands agriculture sector 	<ul style="list-style-type: none"> In-Australia Return 	<p><i>Training the SWP workers when they return to their own country to apply the skills and knowledge to encourage the Tongan farmers ... Qualified officer in Agriculture Ministry in Tonga [Should do this training] (Tongan Worker 9)</i></p> <p><i>Training for application of chemical to the farm and good agricultural practice according to the small [land] area and [amount of] money that individual growers have. [This training should be done by] Ministry of Agriculture and Agricultural Sector in Tonga. (Tongan Worker 13)</i></p>
<p>Support workers to share agricultural knowledge and skills acquired under the SWP with fellow Pacific islanders in their home communities.</p>	<ul style="list-style-type: none"> SWP workers 	<ul style="list-style-type: none"> Return 	<p><i>SWP workers should impart their skills to Tongan growers. (Tongan Worker 14)</i></p>
Infrastructure (hard)			
<p>Establish farms in Pacific island countries as training venues for potential SWP workers and employment venues for skilled SWP workers upon their return home.</p>	<ul style="list-style-type: none"> Pacific islands national governments 	<ul style="list-style-type: none"> Pre-departure Return 	<p><i>Government should establish farms and agriculture sectors so skilled SWP workers can come back and continue working at. Also, they can work and train before going over to Australia. (Solomon Islands Worker 1)</i></p>
<p>Establish (more/bigger) markets or processing factories in Pacific island countries for agricultural produce.</p>	<ul style="list-style-type: none"> Pacific islands national governments Private companies 	<ul style="list-style-type: none"> Return 	<p><i>Vanuatu [should] ... establish [bigger] markets or processing factories. By doing so, since we have the skills already, it will automatically trigger agriculture boost in the country ... Vanuatu government, private companies etc [should do this]. (ni-Vanuatu Worker 7)</i></p> <p><i>[Solomon Islands] Government should be looking for market opportunities for Solomon farmers. (Solomon Islands Worker 1)</i></p> <p><i>If the [Australian] Government can give [us] the chance to give them knowledge to go back home and support capital to set up market would be good. (Solomon Islands Worker 4)</i></p>

Table 8 Training and infrastructure suggestions from SWP workers (continued)

Suggestion	Suggested provider	Relevant SWP phase	Quotes
Support access to farm equipment and machinery in Pacific island countries.	<ul style="list-style-type: none"> Pacific islands national governments 	<ul style="list-style-type: none"> Return 	<p><i>[We] need market for tomatoes and [we] need blowing machine for pollinating tomato flowers [should be provided with support from] Vanuatu Government Department of Agriculture and Trade. (ni-Vanuatu Worker 5)</i></p> <p><i>From [on] our island, how we can bring the plane to spray the leaves? How am I going to bring the tractor to spray the tree and fruit? (Tongan Worker 26)</i></p> <p><i>Easy enough to grow cassava for export, but need [access to] tractor to churn up the soil. (Tongan Worker 24)</i></p>
Infrastructure (soft)			
Make loans available to SWP workers to support agricultural activities in the Pacific islands after returning home.	<ul style="list-style-type: none"> Pacific islands national governments SWP worker recruitment agents and contractors 	<ul style="list-style-type: none"> Return 	<p><i>Funding (loan) should be made available to them who live in rural areas ... [from] agent, Vanuatu Government, contractors. (ni-Vanuatu Worker 1)</i></p>

Opportunities for knowledge exchange

From our interviews with seasonal workers, we identified 3 main avenues for seasonal workers to share their pre-existing agricultural knowledge and skills under the SWP with:

- Australian farmers (their employers)
- other SWP workers (including those from other countries)
- other migrant workers who are not part of the SWP.

We found some limited examples of how SWP participants share knowledge with the Australian employers. Some workers mentioned they could see ways in which Australian farms could benefit from the Pacific way of growing food. For example, one Solomon Islands worker highlighted that Australian farms could benefit from the Pacific 'harvesting process' and practice of growing 'multiple crops in one farm' (Solomon Islands Worker 5). Another explained that Australian farmers could benefit from the disaster resilience of mixed crop farming which contributes to greater security, 'When ... [there is a] disaster we still have other crops to depend on to consume/ survive (Solomon Islands Worker 9). One worker in particular explained that he had exchanged knowledge with an Australian farmer 'on how to properly plant [without] ... use of fertiliser and use of organic farming' (Solomon Islands Worker 16). This shows there are SWP workers interested in exchanging and sharing agricultural knowledge with Australian farmers, creating opportunities for Australian farmers to also benefit from their farming experience and knowledge.

While in Australia, some seasonal workers also came across people from several other countries through their farm employment engagements. Sometimes they work alongside SWP workers from a range of other Pacific island countries, in other cases, they work alongside other types of migrant workers on Australian farms. This diversity creates opportunities to share farming knowledge among seasonal workers from different countries. For example, one worker discussed sharing knowledge about 'kava planting with Vanuatu SWP workers' (Solomon Islands Worker 14). Another mentioned sharing knowledge about 'natural growing technique[s] in farms and garden in the Solomon Islands' with seasonal workers from Fiji, Papua New Guinea and Vanuatu as well as co-workers from Asia and Europe (Solomon Islands Worker 12).

Seasonal workers also mentioned learning from other co-workers. For example, a worker from Vanuatu explained that '[we shared knowledge with other workers] especially with the Indians. They are smart brains, they assist us to plan out our works and targets to make sure there is enough work for us for a given period of time' (ni-Vanuatu Worker 7). These informal knowledge exchange opportunities are occurring spontaneously among workers. They signal potential avenues for better facilitating farmer knowledge exchange events and platforms for SWP workers while they are in Australia.

6.2 Perspectives of Australian employers

All 4 Australian employers interviewed for this research project keenly and promptly acknowledged the hard work, committed work ethic and invaluable contribution of SWP workers to Australian farms and the Australian agriculture sector.

We [Australia] cannot afford to lose this [seasonal worker] program for Australian agriculture ... I don't think we would operate our banana farm without this program anymore. The workers are just amazing, amazing. They are so well-suited to the work ... and I just don't think we could go back to farming if we were without these workers. (Employer 3)

Workers from rural farming backgrounds in the Pacific islands are particularly valued by SWP employers.

Men and women that come from the rural villages, they are the best workers. They hit the ground already running. They're super fit, they're ambidextrous, their balance is amazing, they're used to walking around with a knife, lifting and carrying and bending every day. So, it's not physically challenging for them at all. They actually enjoy being out in the field. So yeah, if you recruit from the cities you really notice a difference in the work ethic. (Employer 1)

We have highlighted how much employers value SWP workers, particularly those from rural farming backgrounds in Pacific island countries. This leads to the importance placed by employers on forming strong, close and caring professional relationships with workers from which important opportunities in relation to Pacific islands agriculture can arise.

Employers 1 and 3 both identified that employers from smaller-scale Australian farms were able to develop much closer relationships with workers than employers from large-scale industrialised Australian farms with multiple employees (who often needed to engage labour hire companies to manage workers).

When you're a smaller grower and you're with your workers all the time you have a much more intimate relationship with your workers. We've got babies named after us in the village [of our workers] and we know who they're talking about and if someone's sick and so forth. Whereas, when you're a team of 400 from 4 different countries you get lost in the mix. But that's why it's [the SWP] been so successful for us, because of our relationship. (Employer 1)

A small farm needs about 10 to 15 workers. So, small-scale comes in all [forms] ... I actually think the success of the [Seasonal Worker] program depends on small-scale Australian farmers because the best success stories come through them. Because of their direct relationship and their welfare and wellbeing understanding. And I saw this [in my dual role] as a labour hire company. [In that role] I cannot provide the same ... welfare and wellbeing ... And I see that as highly important and essential. (Employer 3)

The small-scale farmers we interviewed had a close professional relationship with workers, which included supporting them in various ways beyond their formal workplace roles and responsibilities. This included, for example, providing extra support to those impacted by the COVID-19 pandemic; supporting initiatives (for example, investing in school and transport) in the workers' home villages; caring for injured workers; taking workers on excursions in Australia to tourist sites, sporting events and cultural activities; and creating learning opportunities. This extra support builds trust, cross-cultural knowledge and mutual care. For some employers, this additional support also included, thinking through and creating agricultural opportunities that would be beneficial for their workers, including developing ideas with certain workers, as the remainder of this chapter shows.

Knowledge and skills

As already identified above, workers have a strong appetite to gain more agricultural knowledge and skills through the SWP. We also asked employers if they perceived their workers to be interested in learning more about agriculture through the SWP. For example, when asked if there was curiosity among their workers to learn more and gain new skills, employers, without hesitation, affirmed workers' interest and curiosity. Employer 3 stated: 'They are, they are. And they're really, there are a number that are really keen to do business planning and all of that sort of stuff.' And Employer 4 said: 'Yeah, everything, [from] tractor driving, to, you name it, anything.' Employer 4 also explained that having a smaller farm meant that they could be flexible in shifting around work to spontaneously cater for SWP workers' learning interests and opportunities as they arose on-farm during the work day.

Because we're a smaller farm, [I'm] a bit flexible and I know they'll do an extra hour later in the afternoon. We'll make up for the time that you give them off during the day. Or if I can see they're interested in something, and we're not pressed for time on that, I'll say 'Just go and do that'. Let them get involved in it and see what happens. And, like, they appreciate seeing what happens and understanding it. And then they have a sense of ownership of the farm. And they feel, yeah feel more confident in us and feel like we are doing the right thing by them too. (Employer 4)

Employers were asked whether SWP workers had ever mentioned their farming goals in their home countries (beyond other more common goals for SWP participation) as part of their motivation for participating in the SWP. Employer 3 – who routinely sat down with SWP workers at the beginning, middle and end of their season to discuss their goals – responded, 'They all want to, most of them want to be farmers. But farmers by our definition as opposed to farmers by their definition are probably different.' These employer insights into workers' learning interests and goals not only indicate the strength of understanding direct employers have of their workers' interests, but also provide further evidence of workers' eagerness to learn to support their Pacific islands livelihoods and agricultural endeavours.

Insights and suggestions

Employers offered detailed reflections and insights about what might be needed or helpful to facilitate agricultural knowledge exchange through the SWP and to support workers' farming interests and goals. These included suggestions for formal training, business development opportunities and an awards program to showcase possibilities created by the SWP (Table 9).

Table 9 Training and infrastructure suggestions from employers

Suggestion	Suggested provider	Relevant SWP phase	Quotes
Training			
Train SWP workers in basic skills and techniques of Australian farming, and principles and operation of farming technology	<ul style="list-style-type: none"> Australian Government (relevant departments implementing the SWP) Local community groups and business support organisations in Australia Private companies 	<ul style="list-style-type: none"> In-Australia 	<p><i>If there was not just this tokenistic skills training, but if there was ... basic farming skills and techniques. (Employer 3)</i></p>
Provide training that results in formal agricultural qualifications	<ul style="list-style-type: none"> Australian Government Australian tertiary education institutions Australian farmers (as traineeship/apprenticeship hosts) 	<ul style="list-style-type: none"> In-Australia 	<p><i>They [the SWP workers] could do the training maybe over 1 or 2 years here on the farm and then maybe they'd do one assessment on the farm with the instructor. (Employer 4)</i></p>
Infrastructure (soft)			
Set up organisational and/or grant structure to support the development of small business initiatives for SWP workers in Pacific island countries with the involvement of their Australian employers	<ul style="list-style-type: none"> Australian Government 	<ul style="list-style-type: none"> In-Australia Return 	<p><i>If the government wanted to assist, and you found a [worker], and you see where you can put a little something in and then you see something back, you can keep on going. (Employer 2)</i></p>
Set up an awards scheme to showcase success stories of SWP workers' agricultural investments and innovations in their home countries that have been enabled through their participation in the SWP	<ul style="list-style-type: none"> (Self-funded by) Australian employers Pacific islands governments Australian Government 	<ul style="list-style-type: none"> In-Australia Return 	<p><i>That's why we came up with the concept of maybe doing an awards so that we can showcase innovative things that are happening. (Employer 3)</i></p>

Training opportunities

Our interview guide had a section on ideas for training opportunities to help facilitate agricultural knowledge and skills exchange between farms in Australia and Pacific island countries. Two areas were identified from our interviews with employers:

- training to ensure knowledge is translatable and useful across Australian and Pacific islands farming contexts
- training to build capacity of those SWP workers who are particularly interested in building their formal agricultural skills qualifications.

First, with respect to training to ensure knowledge is translatable and useful across Australian and Pacific islands farming contexts, employers offered some suggestions. Employer 3, reflecting on what might be needed to enable better agricultural knowledge transfer, drew attention to additional support occurring through New Zealand's RSE scheme. Employer 3 pointed out 2 examples, the first being a training session teaching RSE scheme workers about technology (in this case, solar energy technology).

I think what seems to be missing is that beginning step ... and that's where the RSE seems to be really kicking in on some of their programs. They [Vakameasina program] basically did a session, I saw on social media last week where they were teaching the principles of how solar panels work so that you're [an SWP worker is] not just 'Oh yeah I bought a solar panel to plug in my phone', you're actually understanding how that [solar panel] actually works so that you can replicate that in various ways. I think there's technology [for example, water pumps, winching systems] that we've got over here that's a lot simpler, that fills a more basic need that you've got to start off [explaining] before you start talking about the high levels of synergy between the commercial farming activities that we've got here in Australia. Particularly for bananas. (Employer 3)

The Vakameasina program, among several other training activities, offers training support for RSE scheme workers to develop their knowledge and skills with respect to solar energy in partnership with New Zealand-based companies specialising in solar power technology (Scarrow and Carter 2021).

The second example provided by Employer 3 was of a community-led business support organisation in New Zealand called Entrepreneurial Women with Purpose. Employer 3 had noticed a social media post by Entrepreneurial Women with Purpose that was supporting female RSE scheme workers from Vanuatu by sharing business ideas on how to run gardening and food growing businesses in their home countries through its Impact Education Program.³ Employer 3 commented that

3 The Entrepreneurial Women with Purpose Impact Education Program 'supports women from the Pacific Islands working ... in New Zealand under the RSE scheme and enable[s] them with entrepreneurial, leadership and innovation education, [and] mentoring to develop a viable business plan and funding to enable it.' <https://entrepreneurialwomenwithpurpose.com/>

they thought this was a good idea because it was about supporting 'farming skills and techniques' upon workers' return home.

This led into a discussion with Employer 3 about the SWP's Add-on Skills Training program, which Employer 3 felt is currently not fit for purpose,

Our Add-on Skills Training, the concept behind it was applaudable, but the roll out of it has not been ... And [it's] provided little, if any, outcome for the seasonal workers. And, if anything, probably just isolated them a bit more. (Employer 3)

Employer 3 admitted that they had previous experience of 'a really good trainer' under the SWP's Add-on Skills Training program, who provided a course in basic farm directions. That particular trainer was good, Employer 3 explained:

Because he was a farmer himself, a former farmer, so he was giving basic farming instructions and giving them a bit of an understanding of the way that farming works [in Australia] ... all of a sudden, we had guys that were working on their farm for 2 seasons in a row that went, 'Oh okay, that makes sense now'. Yeah, we were actually really surprised. He was part of the Add-on Skills Training and just did really well in relation to it, but then they changed it. (Employer 3)

Employer 3 explained that this particular trainer was not able to continue because the delivery of the Add-on Skills Training program changed. Overall, Employer 3 suggested that informal and formal training support through the SWP in some Australian farming basics and principles of technology would be useful for SWP workers. Employer 3 highlighted that this training could come in various formats, from local business support groups to formal trainers engaged by the Add-on Skills Training program.

Second, in the area of training to build capacity of those SWP workers who are interested in building their formal agricultural skills qualifications, Employer 4 offered some insights from their own son being formally trained through TAFE while working on the family farm. Employer 4 suggested this might be a possible model for SWP workers. Employer 4's son had gained a Certificate III in Horticulture and Agriculture through TAFE (Technical and Further Education) Queensland. Employer 4 explained that the course was set up well and structured to run largely around on-farm employment, so that most students were essentially working on farms with their study happening around their on-farm employment:

Two or 3 years I think is what the course was. You can do it quicker or slower. And it had set modules in what he had to learn and basically, it was his [the son's] experience on the farm from us teaching him ... He [the trainer] would come to the farm. I think [our son] only went there [to the TAFE building] once or twice, to where they [the trainer] were working from ... And it was either every 3 months, the assessor would come out and sit down and spend a half day here on the farm with [our son] going through what he had learned here on the farm and the assessments so that he [the assessor] could basically verify verbally, or through the assessments, the practices that we do on the farm. From irrigation set up, to irrigation management, to spraying and calibrations and area rates and fertilisers and seed types and plantings. It was a good thing that he went through and did it. (Employer 4)

Employer 4 reflected on the fact that this format would be something that would easily suit some of the SWP workers to gain similar formal qualifications:

[The SWP workers could] do the training maybe over 1 or 2 years here on the farm and then maybe they'd do one assessment on the farm with the instructor. He would come out and might have to understand the English and the language would probably be more of an issue, it might need someone to translate even though their English is quite OK, but it's still a little bit, um, broken I suppose you say. But as long as it's translated right. And maybe you could do it with pictures and diagrams. You can do that a lot easier now with photographs on phones and everything. And have a program that they can actually, you can see the planting, see that it's irrigation and yeah some way of verbally doing it with photographs. (Employer 4)

We discussed whether undertaking such training would interrupt workers' ability to earn money under the SWP if they had to spend some time in a classroom. Employer 4 explained it might interrupt their earnings to a certain extent but that such courses are 'like a traineeship, like an apprenticeship', which means employers are subsidised by the government for the time that workers are not working on the farm, enabling employers to subsidise workers to undertake the relevant course.

We were subsidising these trainees to do it years ago, so I think, if we're going to support them [SWP workers] to go home and do agriculture in their 2 months a year or what they can back in whatever country they come from, that's where the bit of support comes from for ourselves, with a TAFE course. When you go to TAFE, you still get subsidised for when they're not working on the farm. So that can happen. (Employer 4)

Employer 4 pointed out that such traineeship courses are still available via TAFE for courses in motor mechanics and so forth, but that unfortunately 'the agricultural side has just sort of all disappeared'.

Business development opportunities

The close relationships that can develop between Australian employers and SWP workers (particularly where repeat participants go to the same Australian farm year on year) has potential to evolve into support for small business development in the realm of agriculture in workers' home countries and in Australia. Two employers discussed their ideas and initiatives in this area, but also pointed to some of the cultural challenges in pursuing small business development ideas suggesting that formal structures to guide such processes might be beneficial.

Employer 2's spouse had developed close friendships with their Tongan workers, resulting in an extra level of care and interest. This was exemplified by Employer 2 and their spouse in many ways, including additional help they provided to workers when injured. Here we focus on an example when they intended to help one Tongan worker, Sione,⁴ purchase a coconut crushing machine to diversify his farming activities and opportunities in Tonga. Employer 2's spouse and Sione had undertaken hours

4 'Sione' is a pseudonym.

of research to work out how Sione could develop additional agricultural business opportunities in Tonga. These discussions started when Sione mentioned to his employers that his uncle has a vanilla farm in Tonga and that the vanilla was being wasted, just dropping to the ground, because they did not know how to export the vanilla. The discussion turned to opportunities that could be supported in Tongan agriculture. The idea of a coconut oil business arose because there are plenty of coconuts in Tonga and plenty of Tongans who use coconut oil, but farmers lack machinery to crush the coconuts to produce oil. This business idea had interest from both worker and employer, but did not come to fruition because the worker only participated in one season of the SWP, which inhibited further development of the business idea.

This example emphasises that synergies can arise between SWP workers and their employers for business ideas in the context of Pacific islands agriculture. If a facilitating structure, such as a grant or sponsorship program, existed to support such initiatives across the different cultural and business contexts of Australia and the Pacific islands, it may help to accelerate these business initiatives and ensure that they can be achieved, even if the worker only spends one season in Australia. As Employer 2 pointed out, not all workers would necessarily follow through with business development ideas, but if willing workers are identified, some initial government grant support might be beneficial in getting such projects started.

Employers 1 and 3 also saw the potential opportunities for small business development for SWP workers upon their return home. Employer 3 suggested creating a small business department in Vanuatu that could assist SWP workers who come from 'remote communities to multiply their money when they get home' by starting small businesses. Employer 1 explained, that to support livelihoods in rural Pacific islands communities, 'It is about market opportunity. We need someone here [in Australia] saying they want to buy pineapples from the Solomon Islands.' Employer 1 said that this would require more systemic changes to Australia's biosecurity and trade system unless pineapples were processed and tinned before export to Australia or other markets.

Employer 1 also discussed very specific ideas that would suit their workers' village context.

We've talked about different things that would be good. I keep telling them to get goats, let's import some goats over there because it's very mountainous, it's all rainforest and they have pigs in sties but I think a goat market, there are some goat markets over there but I think that's something the village could do collectively make an income from. (Employer 1)

Employer 1 had repeatedly employed SWP workers from the same village for 9 years and had travelled to their village multiple times. They had developed very close ties to the village where their workers were from, and were motivated to support business development opportunities there.

Awards opportunities

Employer 3, before their current work on farms and managing a labour hire company, had a background working in state government. This experience, alongside the relationship Employer 3 and their spouse had formed with their SWP employees from Vanuatu, influenced their thinking about what might be a possible way to showcase what SWP workers are achieving as a consequence of participating in the SWP. Employer 3 had noticed 'there's a pride factor' among SWP workers who achieve their goals they set for their SWP participation and so developed 'the concept of maybe doing an awards so that we can showcase innovative things that are happening' as part of the SWP. This idea had, in part, stemmed from performance awards given to SWP workers on the family's banana plantation during the farm's workplace Christmas celebration:

We even find, on the farms, if we even give out small awards, the workers absolutely love it. Sometimes they say, 'We've never received an award in our lives!' [As an example of an award] Just for Christmas time, you know, 'the person that turns up the most' or 'the person that is our lead bagger', 'the absolute machine in relation to [banana] humping [carrying]', you know, you pick an award for every person. (Employer 3)

Employer 3 explained how this had led them to think further about developing an awards ceremony that could take place, for example, on the forecourt of Parliament House in Vanuatu.

The purpose of such an awards ceremony would be to showcase to others in their country what SWP workers are able to achieve from their hard work and earnings on Australian farms:

If we had some kind of an award ceremony that was actually in Vanuatu, that was actually demonstrating, you know, a less tongue-in-cheek and a more serious award that [is] actually demonstrating - like I say to the workers, 'It's not about the person, it's not about winning the award'. That's not the goal. What it is, it's about showing all of those people and the goals that they've achieved and it's about giving all of the people that didn't win the awards, a whole new idea about things they can do, and how they can do things to change their life. (Employer 3)

While Employer 3's awards idea is about showcasing SWP achievements more broadly (for example, housing improvements, education and health investments, and starting up small businesses), Employer 3 did suggest that SWP workers' agricultural activities, investments and achievements could be showcased as one category in an awards ceremony. This may, in turn, encourage broader uptake of such innovations among other SWP workers and the broader community. Employer 3 explained further, 'I was thinking if I can get my [Australian] farmers to be an award sponsor and then it can be about the most innovative farming practice that is working there [in the Pacific]' stemming from SWP participation. In terms of developing the awards, Employer 3 recognised they would 'really require a partnership with the Pacific Island Council [of Queensland]' to make sure the awards were developed appropriately in the relevant cultural context' and that 'a government champion' would also be needed.

6.3 Conclusion

This chapter highlighted multiple untapped opportunities for agricultural knowledge exchange as identified from interviews with SWP workers and employers.

These opportunities are driven and underpinned by:

- SWP workers' eagerness to acquire diverse agricultural experiences and knowledge
- SWP workers' farming goals in Pacific island countries
- strong relationships and friendships that form between SWP employers and workers, especially over common agricultural goals.

SWP workers and employers' ideas for how to support agricultural knowledge exchange through the SWP include suggestions for training and infrastructure as follows:

Training

- Implement better strategic planning around worker recruitment. Those who are recruited should have relevant abilities and come from rural areas and agricultural training centres to ensure SWP participants are well placed to engage in knowledge and skills development.
- Improve training support and practical experience for new SWP workers to better equip them with the knowledge and skills required for work on large-scale Australian industrial farms, to minimise the shock of working in a different farm system.
- Provide training in agricultural skills and techniques while on-farm in Australia, delivered by qualified trainers.
- Train SWP workers to apply agricultural knowledge and skills acquired in Australia to their own Pacific islands farming contexts in a contextually relevant manner.

- Support workers to share agricultural knowledge and skills acquired under the SWP with fellow Pacific islanders in their home communities.
- Train SWP workers in basic skills and techniques of Australian farming, and principles and operation of farming technology.
- Provide training that results in formal agricultural qualifications.

Infrastructure

- Establish farms in Pacific island countries as training venues for potential SWP workers and employment venues for skilled SWP workers upon their return home.
- Establish (more/bigger) markets or processing factories in Pacific island countries for agricultural produce.
- Support access to farm equipment and machinery in Pacific island countries.
- Make loans available to SWP workers to support agricultural activities in the Pacific islands when they return home.
- Set up organisational and/or grant structures to support the development of small business initiatives for SWP workers in Pacific island countries with the involvement of their Australian employers.
- Set up an awards scheme to showcase success stories of SWP workers' agricultural investments and innovations in their home countries that have been enabled through their participation in the SWP.

The next chapter reflects on these opportunities. It also makes additional suggestions and analyses how these currently untapped opportunities could begin to address the barriers to agricultural knowledge exchange via the SWP that were identified in Chapter 5.

7 Synthesis and recommendations



Photo: Conor Ashleigh

7 Synthesis and recommendations

While abundant studies and media pieces have discussed governance aspects, socioeconomic conditions and the benefits of the SWP, far less attention has been given to the agricultural practices and farming experiences of employers and workers in the program. This is surprising given that, at its core, the economic activities embedded in this labour mobility program are agricultural. Based on interviews with 4 Australian SWP employers and 63 Solomon Islands, Tongan and ni-Vanuatu SWP workers, this study has identified a diversity of agricultural knowledge and skills gained by and exchanged between Australian and Pacific island countries participants in the SWP.

Through integrated analysis in Chapters 4, 5 and 6, we presented a range of barriers to, and opportunities for, augmenting agricultural knowledge exchange via the SWP. We also highlighted the agricultural knowledge and skills SWP workers would like to gain. Therefore, we have contributed towards addressing a research gap about the need to better understand SWP workers' learning interests and how workers' newly gained knowledge and skills contribute to agriculture in their home countries (Connell and Petrou 2019).

Throughout the project, the partnerships with PICQ and PIFON allowed us to undertake in-person data collection activities and include advice from Pacific islands community groups about asking questions and

confirming the relevance of results to the Pacific island countries of focus. We have taken this further to look at opportunities for augmenting agricultural knowledge and skills transfer through various pathways.

In this final chapter, we will:

- summarise the answers to our 4 main research questions
- analyse the relevance of the findings from this study for international labour mobility in both Australia and Pacific island countries
- recommend avenues for government agencies and employers to leverage the SWP as a contribution to COVID-19 recovery in Australia and the Pacific islands region, including suggestions for further research.

7.1 Contributions of this study

This study provides an initial dataset to illustrate how the significance of international labour mobility to agriculture and development extends beyond existing economic, financial and, occasionally, social analyses of international labour mobility, including the SWP. The summaries at the end of Chapters 4, 5 and 6 provide details of key findings regarding agricultural knowledge acquisition and exchange occurring via SWP participation and respective barriers and opportunities to such acquisition and exchange. We have shown that

SWP workers value their agricultural work in Australia, bring a wealth of cultural diversity, farming knowledge and skills, and make substantial contributions to their sending countries' development.

SWP workers acquire new agricultural knowledge and skills through their participation in the SWP. They are able to apply some aspects of their newly acquired knowledge and skills on their return to their home countries, despite significant contrasts between Australian industrial, and largely monoculture, farming systems and Pacific islands polyculture home gardens and shifting cultivation farming practices. For example, working on a large-scale vegetable farm in Australia, which may exclusively grow spinach and silverbeet (crops seldom cultivated in Pacific island countries), can provide Pacific islands SWP workers with agronomic insights into different techniques for soil management, water management and crop protection, as well as processing and packaging strategies to reduce the risk of damaging produce. After seeing such techniques while in Australia, we found that some workers adapt their learning to their farming contexts.

Also, SWP workers may be exposed to new crops while in Australia or different methods for growing or tending to crops they are familiar with (for example, hydroponic growing of tomatoes and desuckering banana plants). Some seek to build on this exposure to improve food production in the Pacific island countries. Workers are cognisant of the high costs of farming equipment, chemical inputs and infrastructure in Australia, and understand that it is unlikely for these systems to be transferable in their remote rural villages in the Pacific islands region. Yet workers are able to translate and adapt some of the knowledge and skills gained in Australia to their crops and food production

practices, and share insights with their own communities to support different ways of managing food production systems.

We found, however, that much of the agricultural knowledge and skills being acquired by the SWP workers interviewed is incidental and self-initiated, rather than being acquired through formal planned, directed or structured learning. SWP workers learn by doing, observing and spending time on different farms. Incidental knowledge transfer also occurs when workers return to the Pacific island countries, exchanging experiences and ideas with members of their families and broader local communities. Some workers interpreted their observations of Australian farms as adaptable to their own farming practices in Pacific island countries, while others did not. Some workers identified the relevance of these practices to their Pacific islands farming contexts, but did not have access to the required agricultural extension support in their home countries to enable application of their new knowledge.

Further, a majority of the SWP workers interviewed clearly indicated multiple areas of agricultural knowledge they were interested in acquiring while in Australia and had ideas for how the SWP could support their learning and livelihood development interests. This indicates that there is already a learning process in place, but that program changes to the SWP could:

- identify workers' agricultural knowledge gaps at the start of their participation in the program
- solidify the applicability of specific incidental learning
- create more formal skills development opportunities
- build on SWP workers' agricultural learning and livelihood development interests.

Such interventions require strong partnerships with community groups and organisations that are experienced in working with farmers to ensure there are beneficial implications for agricultural development in Pacific island countries. Future research should explore changes in small-scale farming productivity or shifts in food consumption patterns arising from knowledge, skills and incomes gained from the SWP. This can help understand the longer-term impacts of labour mobility on food security, beyond its contributions to incomes.

This study also provided insights into how SWP employers and their associated farm operations can support agricultural knowledge and skills exchange and development. The 4 SWP employers we interviewed had a strong interest in supporting the learning of their Pacific islands SWP employees. Three employers we interviewed worked in relatively small farm operations (fewer than 30 workers), which allowed them (or their farm managers) to have daily interactions with the workers. The fourth employer provided accommodation to workers and interacted with them on a daily basis. All 4 employers valued the contributions of Pacific islands SWP workers to their farms' productivity and emphasised the need for employers and workers more broadly to understand and value cultural diversity in work practices, such as cross-cultural differences in conceptualisations of time. Employers understood the financial value of the SWP to workers, and its economic development potential for them and their families.

The combination of daily interaction on smaller-scale Australian farms, the high value placed on SWP workers' contributions to their businesses and an ethic of care among the employers interviewed, meant these employers developed close professional relationships with

SWP workers. This provided a basis for employers to identify specific agricultural business ideas and partnerships, make suggestions for relevant training and awards and identify possible changes that could benefit SWP workers and agriculture in Pacific island countries.

Overall, we found that SWP employers contribute to Australia's rural development by hiring SWP workers in their efforts to maintain Australian agricultural production. They also have the potential – with facilitated support – to make valuable and creative contributions to agricultural and rural development in Pacific island countries through the professional relationships and partnerships they form with SWP workers.

It should be noted that, for small SWP employers in particular, there is a high administrative burden of managing SWP workers due to the complex regulatory aspects of the program. Reducing this administrative burden should be incorporated into any knowledge-based program changes to ensure smaller-scale employers are able to continue to participate. Their retention in the SWP is important, as our research has shown that smaller farms may provide fruitful contexts for agricultural knowledge and skills exchange between farmers and workers.

Building on the training and infrastructure suggestions made by SWP workers and employers to support agricultural knowledge exchange, we also foresee opportunities in SWP communications, including through social media. This would facilitate a narrative of SWP participants as learners, promote the value of knowledge exchange through the online networks of SWP workers, and include showcasing both ad-hoc and formal learning opportunities and outcomes.

7.2 Recommendations

Recommendation 1: Enable greater agriculture-oriented research and training within the SWP and broader agriculture-related labour mobility

There are multiple government agencies that have interest in the administration and outcomes of the SWP, and more broadly, international labour mobility. New targeted activities focused on knowledge exchange need to closely engage with the governance structures of the program, particularly the Department of Education, Skills and Employment (DESE), which is tasked with administering the program. The Department of Agriculture and Water Resources may be able to help identify key horticulture sectors and regions where labour gaps on small farms needs to be met. DFAT's international development program and the linked Pacific Labour Facility are positioned to situate some of these activities within Australia's activities supporting rural Pacific regions, notably in the areas of agriculture and food security and capacity building.

From a research lens, ACIAR, as Australia's specialist international agricultural research-for-development agency, is well placed to support and facilitate agricultural research and extension activities in association with the Australian Government-managed SWP. ACIAR's regional expertise would complement the Australia-based expertise via DESE's remit in the arena of education, skills and employment.

Research agencies focused on food systems research that draws from agronomy, development, food security and the wider social sciences can help embed clear impact pathways and strategies into future labour mobility research. ACIAR, as an agricultural knowledge broker enabling research that supports development needs in the Indo-Pacific region, and that also contributes to solutions to meet Australia's agricultural challenges, is uniquely placed to make relevant contributions to agricultural development opportunities via the SWP.

The increasing complexity of food systems research and development means that labour mobility programs can be a core focus for multiple food systems skills development opportunities. The SWP is largely agricultural, which lends itself to multiple skills across specific food value chain skills. However, the Pacific Labour Scheme (PLS) also offers opportunities in other food sectors, such as food handling and services, food preparation, meatworks and food safety. These 'beyond farm' sectors can expand the focus towards broader skills and capacities needed for future food systems professionals.

Possible topics for future research that can enable different partnerships include:

- Working with Pacific islands community-based organisations (both in Pacific island countries and Australia) to ensure training and capacity-building opportunities are beneficial for SWP workers and focus on SWP workers' livelihood development needs and challenges. Such research should be attentive to climate change and food security challenges in Pacific island countries to ensure that emergent training and capacity-building opportunities are adaptive (and to minimise the risks of maladaptation).
- Working with DESE (as the administering organisation of the SWP) and relevant Pacific islands-based organisations (for example, PIFON), institutions (for example, rural training centres and Asia-Pacific Training Coalition), government agencies and SWP recruiters to ensure that training and capacity-building opportunities are integrated across all 4 stages of the SWP (recruitment, pre-departure, in-Australia, and return home and reintegration).
- Working with Australian SWP employers across different scales of farms to identify farm-system specific capacity-building and training opportunities that can be adapted to SWP workers' Pacific islands farming and livelihood contexts and integrated with SWP employers' labour needs.
- Recording how SWP participation changes food production and farming systems in Pacific island countries at specific scales and villages. Research could examine changes to farm practices and food consumption habits at the community level, and over a full research project cycle (3 to 4 years), and match this with workers who go to Australia and support their farm systems in Pacific island countries throughout the period.
- Financing incentives for agricultural business partnership development between SWP employers and SWP workers that focus on small-scale agribusiness development in Pacific island countries.
- Exploring the gendered nature of international labour mobility, and the positive and negative impacts of migration on gender relations in rural Pacific regions.
- Understanding gender differentiation of knowledge adoption and application, and youth opportunities to be part of the transfer and knowledge diffusion system.

Recommendation 2: Recognise the SWP as a pathway to ongoing COVID-19 socioeconomic recovery

The Pacific islands region has been severely affected by the COVID-19 pandemic. With no clear indication of when international border restrictions will be eased to allow freer movement of people, the incomes generated from Pacific islands tourism will be low, continuing to increase pressure on national budgets. Unemployment rates in Pacific island countries have grown, notably in import-dependent countries like Tonga and Vanuatu (Davila et al. 2021). Earlier analysis of the impacts of the COVID-19 pandemic hypothesised that financial remittances from the Pacific diaspora were going to decline. However, the opposite has been observed, with remittances into the Pacific remaining relatively stable during 2020 (Doan et al. 2020; Howes and Surandiran 2020; Davila et al. 2021). With little easing of border restrictions on the horizon, financial remittances from seasonal workers will continue to be important for Pacific island countries. Coupled with the need for Pacific island countries to identify new sources of income, Australia's agriculture sector urgently needs labour for ongoing harvest seasons to meet the ongoing international export demand (Greenville et al. 2021).

The SWP is a potential leverage point for supporting Pacific island countries and Australian agricultural futures, especially because the SWP sits at a nexus of relevant development policies in Australia and the Pacific islands region (Figure 5). In Australia, Pacific Step-up presents a narrative of accelerating partnerships and development outcomes in the Pacific islands region as part of Australia's foreign policy objectives, and international labour mobility features as a central pillar (Connell and Petrou 2019; DFAT 2021a).

We note that supporting education for Pacific islands' people through the Australia Pacific Training Coalition also forms a key part of the Pacific Step-up (DFAT 2021b). The Australia Pacific Training Coalition was originally set up to contribute to labour mobility, although increasing complexity has created challenges for the program (Howes 2021). In particular, this Australian-run training program has not fully captured the needs and capacities for training that could be leveraged in the Pacific by training people in their contexts.

In addition, the Australian Government recently released its *Partnerships for Recovery: Australia's COVID-19 Development Response* framework (Commonwealth of Australia 2020b). This document positions international labour mobility as one of the tools for supporting economic recovery in the Pacific islands region in light of COVID-19 pandemic impacts and the critical role financial remittances are playing at this time (DFAT 2020). In the *Partnerships for Recovery* framework, supporting food security is emphasised as an important component of regional stability (Commonwealth of Australia 2020b).

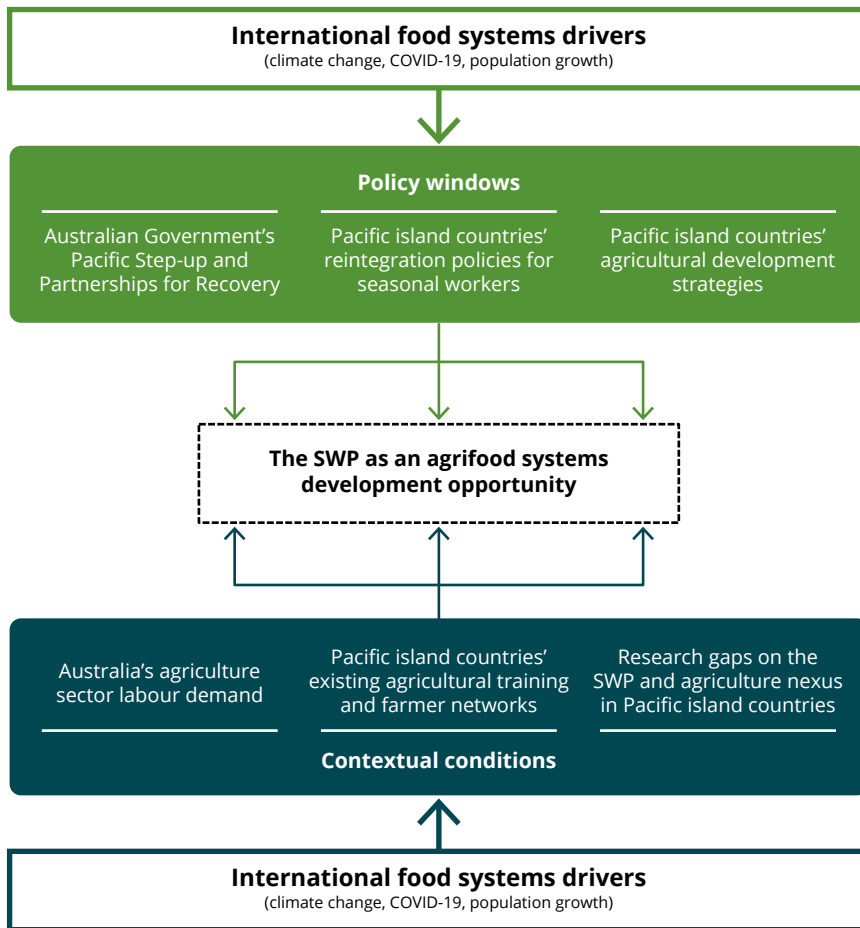


Figure 5 Drivers of the SWP as a development opportunity

While the SWP's largely agricultural focus, and the broader industries focus of the PLS, remain targeted to the Pacific, it is important to note the potential changes in outcomes for different workers that may occur as a result of the proposed new agriculture visa targeting South-East Asian countries. The proposed new visa program will have an inbuilt pathway to residency – something not offered in the SWP or PLS, despite their demonstrated contributions to Australian economies. There may be longer-term, negative implications for

workers from Pacific island countries if there are greater incentives for employers to recruit workers from South-East Asia under the new agriculture visa than there are for recruiting Pacific islands workers under the SWP or PLS. The proposed new visa also considers options across a spectrum of low to highly skilled agricultural workers (Sullivan 2021), but the SWP continues to be categorised as a program focused on 'low-skilled' labour supply for Australia. This 'boxing' of people into skilled/unskilled categories can perpetuate long-term

biases among employers and wider media and society about the contributions that different groups of workers make to Australian farm systems. Our study has provided critical evidence of Pacific islands SWP workers as knowledgeable and skilled agricultural workers who are able to adapt physically and mentally to the demands of Australian agribusiness, develop ways of working as teams to support employers, and who arrive in Australia equipped with agricultural skills and understandings of farm systems stemming from their rural backgrounds. It will be important to ensure Pacific workers are not devalued or disadvantaged as the new agriculture visa is implemented (Dziedzic et al. 2021).

Among Pacific islands governments, meanwhile, there are international labour mobility policies and food security-focused development frameworks providing a policy context that potentially makes the SWP a central component of future capacity building and development. Some Pacific island countries are developing targeted policies for workers to reintegrate into their countries following program participation. As of 2021, for example, the Government of Vanuatu has developed a *Framework for the Reintegration of Agricultural Workers in Labour Mobility Programs* (Government of Vanuatu 2020). This framework has a vision for a 'highly skilled agriculture sector for Vanuatu with workers investing their human and financial resources into the agricultural sector' (Government of Vanuatu 2020:10), and has skills development for seasonal workers as a core objective. The Pacific islands region, more broadly, continues to remain heavily focused on agriculture and fisheries as key sectors contributing to socioeconomic development in the region (SPC 2021). These sectors have become even more critical during the COVID-19 pandemic as they contribute to basic food security and livelihoods (Davila et al. 2021; Iese et al. 2021).

Each of the policies outlined above intersects with 3 agriculture-related contextual conditions influenced by major food systems drivers, such as climate change and the ongoing impacts of COVID-19:

- demand for labour in the Australian agriculture sector
- existing agricultural training capacities and farmer networks in Pacific island countries
- research gaps around agricultural impacts of the SWP in Pacific island countries.

As noted throughout this report, Australian agriculture, despite its high productivity, faces risks due to labour shortages. Prior to the COVID-19 pandemic, these labour shortages were partly filled by diverse migrant workers (Pacific islands migrants and temporary migrants, including backpackers, from numerous other countries). This situation may resume in the future as international travel restrictions ease. Currently, however, only Pacific islands workers continue to arrive in Australia through the SWP and PLS, and they are a crucial source of labour for Australian agriculture. The current and growing demand for agricultural labour from Pacific island countries in Australia, and the easing of Australia's international border restrictions to allow these workers in (an exception not made for other migrants), is an opportunity to develop new bilateral agreements between Australia and Pacific island countries (Curtain and Howes 2020). The demand for Pacific islands workers from the Australian agriculture sector, and exceptions being made to allow such workers to arrive in Australia, also creates opportunities to develop more targeted agricultural knowledge exchange to support worker reintegration on their return home.

In the Pacific islands region, there are a number of existing agricultural and rural training centres and agribusiness opportunities for youth that can be accessed to embed agricultural skill development for SWP workers, both prior to and after SWP participation. For example, the Tutu Rural Training Centres, originally from Taveuni in Fiji, have been adapted in other countries such as Vanuatu to support farmer extension and learning (McGregor and Matairatu 2014). They involve village youth, including women, in commercial agriculture and embed a range of planting, harvesting and commercialisation strategies into the training (McGregor and Matairatu 2014). Similarly, the Youth@Work Programme in Solomon Islands (originally managed by the SPC) supports youth with training and practical experience to prepare them for workforce participation. Many participants report developing knowledge, skills and new techniques in agriculture that they then apply in their villages (McDonald and Kyloh 2015).

Recommendations for linking Youth@Work and the SWP have been discussed in an evaluation of the Youth@Work Programme (McDonald and Kyloh 2015), indicating the opportunity to address the agricultural needs of both the sending and receiving countries. This could be of benefit to SWP employers seeking specific skills for their farm operations and a key international workplace experience for Solomon Islands youth.

There are also a number of Pacific islands farmer organisations that are well placed to partner with the SWP and extend their existing role in developing and facilitating agricultural knowledge exchange and extension. As demonstrated by the involvement of PIFON in this study, Pacific islands farmer organisations are crucial for identifying connections between SWP workers and agricultural endeavours in Pacific island countries.

Research conducted about the SWP has, to date, largely focused on economics and governance (for example, Doyle and Howes 2011; World Bank 2018; Curtain and Howes 2020). This research has contributed critique and analysis that is necessary for transparency and to continue to inform the evolution and operation of the SWP. These studies provided our project with a very strong platform to more nuanced understandings of how the SWP can contribute to economic development in worker-sending countries.

However, broader sustainable development and long-term resilience in the Pacific are not purely a matter of financial income-earning and spending potential; they also have major sociocultural and agri-environmental dimensions. These have partially been explored in some studies (Dun et al. 2018; Chatterier 2019; Petrou & Connell 2019), but there are still opportunities for novel transdisciplinary research into labour mobility. This research can draw insights from disciplines such as sustainability science, human geography, anthropology and wider humanities, coupled with agronomy and development economics, to link agroecological change, labour mobility and wider Pacific and Australian socioeconomic development.

In the Pacific islands region, where agriculture and forestry underpin most people's livelihoods and employment, and therefore the economy, it would be neglectful not to gain a deeper understanding of how the SWP and related international labour mobility programs are influencing agriculture. It is important to investigate more systematically how the temporary absence of workers from the Pacific islands is changing agricultural labour, food production and agriculture business investments in Pacific island countries. Further, more systematic examination into how SWP workers' earnings directly contribute to

changing household food production and consumption as a dimension of broader economic development is required. The COVID-19 pandemic has shown it is timely to use evidence and catalyse partnerships to change the narrative of Pacific islands seasonal workers from purely economic labourers to crucial actors in maintaining Australian food security and Pacific development. It is likely that Pacific islands seasonal workers are also crucial contributors to food security in their own countries, yet precisely how is still largely unknown due to an absence of studies.

Our study points towards a need to undertake further research in a number of areas pertaining to the agricultural knowledge and skills exchange possibilities and agricultural development potential of the SWP. The first is to work with SWP employers who run farm operations at different scales in Australia. These employers, as collaborators in research, can help answer questions about how the scale of farm operation can help train and support agricultural capacity building, and leverage the skills that workers already have when they come to Australia. There are limited studies of how SWP employers interact with workers, what they look for with respect to agronomic and social skills, and how SWP workers contribute (beyond labour) to Australian farming systems.

A second research area lies in co-designing content and training materials for SWP workers in a culturally sensitive way that allows both employers and workers to develop an understanding of the potential agricultural skills that workers can develop when in Australia.

A third area of research relates to the reintegration of workers in their Pacific island countries and their agricultural activities, especially tracking changes in farm practices, production and management across different PIC locations with varying levels of remoteness (e.g. peri-urban villages versus villages on outer islands). Such research should be attentive to the potential for changes in SWP workers' farm practices upon returning home to spread and thereby influence their broader communities' ways of farming.

A fourth area of research is understanding the overall impact on agricultural practices in rural communities in Pacific island countries of incomes acquired during SWP participation. There is very limited data or information on this topic although we understand the World Bank is currently undertaking a broadscale social impact study of the SWP. Understanding how SWP workers spend their incomes in relation to agriculture, changing farming practices (including adapting to climate change) and in some cases diets, or the extent to which SWP workers with farming backgrounds are exiting agriculture, are crucial areas of research.

7.3 Contributions of this study to Australia-Pacific labour mobility policy

This report was written in mid-2021. On 23 November 2021 (3 months after the completion of the study), the Australian Government announced a streamlining system for international labour mobility from the Pacific Islands region. A newly created Pacific Australia Labour Mobility (PALM) scheme will integrate the current functions of the SWP and PLS. Under the PALM scheme, participants will be able to remain as seasonal workers on short-term visas but can also apply for longer-term stays in Australia.

While our study and this report focused on the SWP, the overall themes that emerged, regarding agricultural knowledge exchange in the context of circular migration, remain relevant, and possibly take on even greater relevance given the emphasis of the PALM scheme on providing 'increased support for worker skills development' (Commonwealth of Australia 2021b). At its core, the PALM scheme will retain the same purpose as the SWP and PLS, where Australian labour shortages are met with workers from the Pacific islands region. Under the new scheme, seasonal workers will still be required to participate through approved employers.

In section 7.1 we discussed how changes in the SWP could expand to look at formal development opportunities, identify agricultural training desired by workers and solidify incidental learning systems. Recommendation 1 focused on enabling agriculture-oriented research and training as an integral part of labour mobility schemes, and Recommendation 2 focused on the role of international labour mobility as a COVID-19 recovery strategy. These recommendations, and the narratives and stories presented throughout this report, provide the PALM scheme with evidence of how employers can create enabling environments for training and how the PALM can leverage re-integration policies in the Pacific region to support knowledge exchange. Importantly, this report has demonstrated an appetite for such training and knowledge exchange opportunities among SWP workers, which can be expected to persist through the transition to the PALM scheme.

There are 2 main areas where the PALM scheme can incorporate some of the recommendations from this report. One is to retain the circular nature of migration, and the second is to leverage the inbuilt training focus of the PALM scheme to focus on agricultural skills development. Our report focused on the SWP – a program built on short-term visas and workers' return to their home countries on an annual basis.

As evidenced in Chapter 4, workers do invest and continue to work in agriculture upon their return home. The relatively short-term nature (9 months) of SWP participation allows workers to immediately try different agricultural activities and newly acquired skills when they return home, and Pacific island countries can use this time to re-integrate workers while they wait for their next period of seasonal work. While the PALM scheme does have the option for longer-term visas (e.g. up to 4 years, with multiple entries to Australia), our study suggests that retaining short-term opportunities will benefit knowledge flows between Pacific islands and Australia. The fact that most participants in this study continue to engage in agriculture when they return home indicates that retaining options for short-term circular migration will also be important for Pacific islands food production, and ultimately, the food security of households and communities.

In Chapter 6, we presented a number of training and business development opportunities discussed by workers and employers. The PALM scheme has clear criteria related to training, yet these opportunities focus largely on 'employer-centred' training. The integrated scheme of the SWP and PLS, forming PALM, will be managed by the Australian Department of Foreign Affairs and Trade, which has an international aid and development focus. This provides the potential to expand training opportunities to support workers to develop agri-technical skills that may benefit them and their Pacific islands countries of origin.

Furthermore, the PALM scheme can act as a catalyst for Australian diplomatic relations with Pacific islands countries by engaging with the growing number of worker re-integration policies emerging in the region. These policies are focused on ensuring time spent working in Australia translates into benefits for local communities upon workers' return home. As discussed earlier in this chapter, the multiple existing training colleges and formal skill development centres in Pacific island countries offer the PALM scheme an opportunity to work with and support existing Pacific-based knowledge exchange centres, institutions and priorities.

7.4 Conclusion

Our detailed recommendations from this study are presented in Table 10. They sit across both major recommendations presented in this chapter. These are not exhaustive. They provide an indication of how different agencies can leverage existing work in the SWP and amplify its contribution to sustainable development. Overall, the recommended actions relate to expanding the framings of seasonal work from being a purely economic problem towards one more oriented towards agrifood systems topics and sustainable development. This framing will add value to an already established and trusted policy in Australia and the Pacific, and can help catalyse new ways of supporting Pacific development, Australia's food security and contribute to the knowledge gap on the agriculture-circular migration nexus.

The SWP, despite its challenges, continues to be an important contributor to socioeconomic development for the Pacific. This labour mobility program is an important contribution Australia can continue to make to support the Pacific region. The circular migration aspect of the SWP has allowed some workers and employers to build trusting relationships with each other, and in the cases illustrated in this report this has enabled learning and sharing opportunities between workers and employers. This learning has gone beyond simply farming skills, and has included broader sense of understanding of each other's cultures, priorities and needs in both Australia and Pacific countries.

Our study was conducted when the impacts of the COVID-19 pandemic were turbulent and uncertain, and travel restrictions between Australia and Pacific island countries were an ongoing reality. Labour mobility, coupled with the climate impacts Pacific farmers will continue to face, can act as a potential avenue for supporting incomes and a diversity of agricultural training and production opportunities. Targeted training that mirrors the scale of farming in the Pacific islands and the relevant market and food security needs can augment the agricultural legacy and impact of the SWP. Community groups who are experienced with working with farmers and Pacific diaspora communities can provide a strong bridge between employers and the sending country, and links with relevant training groups and centres that are most connected with farmers in the Pacific.

This exploratory study has provided the analysis and evidence base to assist different actors in the labour mobility system in embedding more conscious agrifood systems knowledge into the future of labour mobility between Australia and Pacific island countries.

Table 10 Recommended actions for different stakeholder groups in labour mobility

Stakeholder	Reason for inclusion	Recommended actions
DESE	Administering agency for the SWP	<ul style="list-style-type: none"> • Work with employers to catalyse an awards or recognition system to showcase the progression of high-achieving workers. • Pilot placement and training for workers with clear willingness to apply new farming skills in their home countries. • Determine what seasonal workers actually require in their farm systems to understand how employment in Australia can build these capacities. • Develop a Farmer Exchange Program option for targeted employers with a legacy of sourcing workers from specific sites to visit the Pacific and connect with the families and communities where the workers are from. • Augment Pacific voices in the program and ways of knowing, learning and working that resonate with Pacific cultures.
Employers	Major actor of change driving demand of seasonal workers to Australia	<p>Large employers</p> <ul style="list-style-type: none"> • Allow workers to work across a range of roles on the farm to diversity their exposure to processes, systems and other workers. This already occurs in some farms and is a case by case recommendation. • Provide a ‘learning room’ with Pacific relevant environments to enable socialising, discussion and learning about Australian farm systems, agri-business and marketing. <p>Smaller employers</p> <ul style="list-style-type: none"> • Host a cultural exchange session where Australian and Pacific ways of farming are presented using images, props, videos, etc. • Connect with diaspora and community groups so workers understand the wider cultural community they are part of. • Support cross-learning among the workers, including cross-cultural learning about the Australia farm system.
Development funders	Responsible agency for Partnerships for Recovery framework	<ul style="list-style-type: none"> • In supporting programs that align with national agricultural development strategies, seek ways of supporting returned seasonal workers as actors who can enable rural development • Examine existing training programs and capacity-building activities focused on agriculture, and determine how ready they are to allow trainees to form part of an agricultural labour force in Pacific island countries.

Table 10 Recommended actions for different stakeholder groups in labour mobility *(continued)*

Stakeholder	Reason for inclusion	Recommended actions
Pacific sending countries	Major actor in sending workers and responsible for the agricultural development enabling environment	<ul style="list-style-type: none">• Provide small loans to support the application of newly acquired skills in villages (for example, small-scale irrigation), with a particular focus on skills that facilitate climate change adaptation and enhanced food security in Pacific island countries.• Work with the Australian Government to develop country-specific training materials for reintegration into rural and peri-urban communities.• Work with existing qualified agricultural youth and support them with links between workers and businesses.• Develop incentives or matching funding to support investments in innovative agriculture activities to support farm systems.
Research funders and researchers	Continuing players in providing new evidence, critique and knowledge on the opportunities in labour mobility	<ul style="list-style-type: none">• Frame novel research into labour mobility and circular migration from a broader sustainability science perspective, drawing from disciplines and knowledge sectors that so far have not been involved in SWP and labour mobility research.• Work with trusted diaspora and locally based farmer groups and research centres capable of recruiting and building long-term rapport with returned seasonal workers. The returned worker stories are very missing and highly important.• Work with employers as research collaborators to embed farm skills and learning research activities into the SWP, and understand further the employer-worker social capital.• Monitor the reintegration pathways from labour mobility in Pacific countries, and the contributions they have made to rural development.• Develop gender-sensitive methodologies and frameworks to study the gendered nature of knowledge diffusion and impacts of labour mobility.

Appendixes



Appendix 1: Interview guide

Section	Theme and research question	Core questions
Pre-interview notes	Researcher notes about participant recruitment and interview setting	<ul style="list-style-type: none"> • How participant was recruited • Interview location (town) • Interview location (setting, e.g. farm shed, cafe) • Name of interviewer(s) • Name of interpreter • Language of interview
Background: Who are they and where do they come from?	Location and sociodemographic context of the participant	<ul style="list-style-type: none"> • Name • Gender • Age • Marital status • Household size • Number of times in Australia (for any reason) • Country • Country province
Background: Participant's farm information	Farm profile, type of production system	<p>Please tell us about your family farm in your country.</p> <ol style="list-style-type: none"> 1. How big is it? 2. How many years have you been on this farm? 3. What does your family grow? Do you have livestock? 4. Who does what on the farm (planting, harvest, selling)? 5. What do you sell and who do you sell to? 6. What food do you and your family eat from your farm? 7. What extra food do you have to buy for you and your family to eat?
Background: Participation in SWP	Time spent in Australia and where	<ol style="list-style-type: none"> 8. How many years have you participated in the SWP? 9. What type of farms (crop and system) have you worked on in Australia? 10. Where has that/have those farm(s) been located?

Section	Theme and research question	Core questions
<p>Agricultural knowledge and skills acquired in Australia and what participants wish they could learn</p>	<p>Theme: commodity or farm-system specific knowledge acquisition What types of agricultural knowledge and skills have Pacific islands labour mobility workers gained or would like to gain across the food production value chain while working in agriculture in Australia?</p>	<ol style="list-style-type: none"> 11. What is the type of work you have done and do in Australia? 12. What are some new things/skills you have learned from the work you have been doing in Australia? 13. Can you tell me about some of the agricultural skills and knowledge you are learning about while working on this farm? (<i>Prompts – techniques, packaging, processing, marketing</i>) 14. Are there any particular agricultural skills or knowledge that you would like to learn when working in Australia? 15. Have you seen Australian farmers do things you find interesting? Prompt to elaborate on comment – climate change adaptation, water management, packaging, marketing. 16. When you spend time in Australia, are there things you think the SWP could do to support your farming skills and knowledge?
<p>Income, knowledge and skills gained in Australia and application to agriculture in the Pacific islands</p>	<p>Theme: Benefits and challenges of SWP. Changes in food security and livelihoods How have returned Pacific islander labour mobility workers applied income, agricultural knowledge and skills gained while working in Australia to agriculture in their own country, and what barriers do they face in applying new knowledge and skills?</p>	<ol style="list-style-type: none"> 17. Has your farming in the Pacific islands changed since spending time in Australia under the SWP, and if so, how? <i>(Prompt: Do you have new equipment/tools? New techniques? Changes in labour? Packaging and distribution/waste management. If it has not changed, explore why not – what are the barriers to change?)</i> 18. From the money you have earned in Australia under the SWP, have you used any of it to support your farm/food growing activities in your home country? <i>[If yes] Can you please tell me more? How have you used the money? [If no] What are the reasons you haven't used your money for your farm/food growing activities?</i> 19. What type of food does your family buy when you send money? <i>(prompt diet and food security questions)</i> 20. Have you encountered any farming problems on your family farm where your experience in Australia has helped you address them? <i>[prompt around climate change]</i>

Section	Theme and research question	Core questions
		<p>21. How do you think the SWP experience helps with food production in your country? How do farmers benefit (<i>prompt around climate change, innovative water techniques, soil management etc.</i>)</p> <p>22. Are there any skills and knowledge that you have learned about in Australia that you have applied when you return home to your own country? <i>[If yes]</i> Can you please tell me more? <i>[If no]</i> What are the reasons you haven't learned about anything in Australia that you could apply when you return home?</p>
<p>Knowledge and skills exchange with others and reciprocal learning on farms</p>	<p>Theme: Reciprocal knowledge exchange and farm investments What types of innovative agricultural practices in different food production value chains can be reciprocally developed between Australians and Pacific islander workers involved in temporary labour mobility programs, and how are incomes generated used for agriculture in the Pacific islands?</p>	<p>Sharing at home</p> <p>23. Have you shared farming knowledge and skills gained in Australia with your family members, neighbours or others in the Pacific islands? <i>[If yes]</i> Can you please tell me more? <i>[If no]</i> What are the reasons you haven't shared your farming knowledge and skills with others?</p> <p>Sharing in Australia</p> <p>24. Have there been opportunities for you to share your farming knowledge and skills with other SWP workers? <i>[If yes]</i> Can you please tell me more? <i>[If no]</i> What are the reasons you haven't shared your farming knowledge and skills with other SWP workers?</p> <p>25. Is there anything that you have learned about from other Pacific islanders (workers, farmers, diaspora members) while you have been in Australia that has been helpful for your own farm/food growing activities in your home country?</p> <p>26. Did you see areas where Australian farms could benefit from the Pacific way of growing food? (<i>Prompt examples – think of the scale of production, way of managing integrated systems, harvesting strategies.</i>)</p>

Section	Theme and research question	Core questions
		<p>27. Have you shared your farming knowledge and skills with Australian farmers? <i>[If yes]</i> Can you please tell me more? <i>[If no]</i> What are the reasons you haven't shared your farming knowledge and skills with Australian farmers?</p>
<p>Format for a future training and exchange program</p>	<p>Theme: Format of a knowledge exchange or training program What opportunities exist for developing agricultural and food production value chain training and exchanges in future Pacific islands labour mobility programs?</p>	<p>28. What type of activities or training do you think future SWP workers could receive to help support agriculture in their countries? 29. Who do you think could do this training (e.g. employer, labour facility, in-country training). <i>[End with thanks and any questions to us]</i></p>

Appendix 2: Coding framework

Barriers and opportunities			
Agricultural value chain component			
	Production:	Processing:	Marketing:
	<ul style="list-style-type: none"> • seed management/sourcing • planting pattern • providing plants with nutrients/encouraging growth • keeping plants healthy • managing soil • supplying water to plants • protecting plants from pests/problematic weather (storms, heat) • harvesting 	<ul style="list-style-type: none"> • sorting/grading • packaging • transport 	<ul style="list-style-type: none"> • access to market • business opportunities
Techniques	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>
	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>
Technology	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>
	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>
Institutions	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>	<i>Australian context/employer perspective:</i>
	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>	<i>Pacific context/worker perspective:</i>

	Benefits, barriers and opportunities	
	Mentioned by workers	Mentioned by employers
Non-agricultural knowledge and skills transfer/exchange		
Financial		

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