

## **Final Report**

# **Citrus harvest handbook**

**Project leader:**

Michelle Smith

**Delivery partner:**

NSW Department of Primary Industries

**Project code:**

CT19001

**Project:**

Citrus harvest handbook (CT19001)

**Disclaimer:**

Horticulture Innovation Australia Limited (Hort Innovation) makes no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in this Final Report.

Users of this Final Report should take independent action to confirm any information in this Final Report before relying on that information in any way.

Reliance on any information provided by Hort Innovation is entirely at your own risk. Hort Innovation is not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from Hort Innovation or any other person's negligence or otherwise) from your use or non-use of the Final Report or from reliance on information contained in the Final Report or that Hort Innovation provides to you by any other means.

**Funding statement:**

This project has been funded by Hort Innovation, using the citrus research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

**Publishing details:**

ISBN 978-0-7341-4787-5

Published and distributed by: Hort Innovation

Level 7

141 Walker Street

North Sydney NSW 2060

Telephone: (02) 8295 2300

[www.horticulture.com.au](http://www.horticulture.com.au)

© Copyright 2022 Horticulture Innovation Australia

## Contents

|  |          |
|--|----------|
| <b>Final report .....</b>                                    | <b>1</b> |
| <b>Citrus harvest handbook.....</b>                          | <b>1</b> |
| Contents.....  | 3        |
| Public summary .....   | 4        |
| Keywords.....  | 5        |
| Introduction .....   | 6        |
| Methodology .....  | 7        |
| <i>Survey and consultation .....</i>                         | <i>7</i> |
| <i>Survey.....</i>   | <i>7</i> |
| <i>Review existing resources and update as required.....</i> | <i>7</i> |
| <i>Citrus Harvest Handbook.....</i>                          | <i>7</i> |
| <i>Citrus Harvest Induction Manual .....</i>                 | <i>7</i> |
| <i>Develop new material .....</i>                            | <i>8</i> |
| Results and discussion .....                                 | 9        |
| <i>Survey results .....</i>                                  | <i>9</i> |
| Outputs .....  | 10       |
| Outcomes .....   | 12       |
| Monitoring and evaluation .....                              | 13       |
| Recommendations .....  | 14       |
| Refereed scientific publications .....                       | 15       |
| Intellectual property .....                                  | 16       |
| Acknowledgements.....  | 17       |
| Appendices .....   | 18       |

## Public summary

With over 1,900 growers across Australia, the citrus industry is a major employer of labour particularly during harvest. As the work is seasonal there is a need to be continually training and inducting new workers onto citrus farms. Workers come from a range of sources including itinerant travellers and increasingly via government programs such as the Seasonal Worker Program and the Pacific Islander Scheme.

This project developed training resources to improve workplace health and safety in the harvest of citrus in Australia. Following recommendations from growers and industry surveys and an industry advisory panel, existing resources were updated, and new tools developed that align with a range of job roles from pickers, supervisors and farm managers.

An industry survey plus consultation with a range of government agencies active in the Pacific Labour Scheme and the Seasonal Worker Program determined 4 priority languages for translation of safety resources. The Citrus harvest Handbook, 5 WHS posters and 6 videos have been translated into Tongan; Samoan; Bislama (Vanuatu) & Malay.

Other resources, available in English include an Induction manual an online WHS course for pickers.

These resources can be accessed via the NSW DPI website and Tocal YouTube Channel. Open access to the online module is available via the Tocal College Canvas Catalogue.

## Keywords

Work Health Safety; Seasonal Workers; labour hire; Pacific Islander Scheme; Inductions

## Introduction

This project was undertaken to help producers meet the challenge of providing a safe work to a highly mobile and itinerant workforce.

Agriculture is a high risk industry. This was identified by the Australian Work Health and Safety Strategy 2012-2022 identifies Agriculture as a priority industry group to improve the health & safety of its workforce. The Australian Centre for Agricultural health and Safety farm safety report card for 2017 showed there were 68 farm deaths in Australia and 179 non-fatal incidents. <https://aghealth.sydney.edu.au/wp-content/uploads/2019/07/Farm-Related-Injuries-Final-Report-2018.pdf>

Some job tasks associated with the harvest of citrus are potentially high risk, such as the use of machinery, working at heights and slips, trips and falls. The use of seasonal workers increases the complexity for citrus producers in managing WHS issues. Many seasonal workers do not speak English and have minimal experience in undertaking physical work in Australian weather conditions.

Farm supervisors and labour hire contractors have minimal time to train seasonal workers which can have implications on both the quality of the harvest and safe work practices.

Consultation conducted in VegWHS Training Resources (VG16031) found that many growers have a significant knowledge gap when it comes to WHS and do not know where to start. A key recommendation from the VegWHS project was longer term training and access to WHS help for growers as the need arises, such as when a negative event (accident or state work safety authority audit) occurs.

While there are many generic Work Health & Safety resources available via government organisations such as SafeWork, access to industry specific resources will be of benefit to both employers and employees.

## Methodology

### Survey and consultation

The project established an Industry steering committee to provide strategic advice and help in testing the response and effectiveness of resources before they were released. The role of the PRG is to provide feedback and strategic advice on project outputs.

PRG members include a representative from Citrus Australia; SafeWork NSW; MADEC (manages the National Harvest Labour Information Service); 2 x grower representatives (1 x large; 1 x mid size)

Consultation was also undertaken with Plant Health Australia who released a range of translated biosecurity for farm workers videos and factsheets in 2020. Plant health Australia based their decision on the most needed languages for translation on participants in the Seasonal Worker Program; Working holiday VISA holders and direct conversation with 3 x horticulture labour hire companies; NT Farmers and the Northern Territory and South Australian agriculture departments. Other stakeholders consulted include MADEC labour hire company; Agriculture Victoria Seasonal Workforce Coordinator & the Australian Government Department of Education, Skills and Employment Seasonal Worker Programme

### Survey

Sixteen face to face surveys were undertaken in 2021 in New South Wales, Victoria, South Australia & Western Australia. Five face to face surveys were completed in Queensland in 2020 prior to COVID -19.

A short online survey was also designed to attempt to reach more people. This was promoted via Citrus Australia social media and newsletters, NSW DPI social media and the WA industry newsletters. The project was also promoted at Citrus Australia grower updates in FNQ & Bundaberg by NSW DPI and the survey distributed to 120 citrus growers in the Mareeba area by DFAF Citrus Development Officer.

### Review existing resources and update as required

#### Citrus Harvest Handbook.

The Citrus Harvest Handbook was developed by NSW DPI in 2007. This handbook helps pickers use the correct harvest methods, reducing fruit damage and picking faster and safer. The handbook is currently available as a PDF on the NSW DPI website. This project updated the current edition and has made it available in 5 languages.

#### Citrus Harvest Induction Manual

The Citrus Harvest Induction Manual was developed by NSW DPI in 2018 and is yet to be widely distributed to industry. This manual has been reviewed to ensure it meets the general induction requirements of citrus enterprises. It is available as a Word document so that it can be contextualized to each enterprise.

## Develop new material

**Videos.** Six safety focused harvest videos have been developed and promoted through a range of channels and industry sites and forums. This resource is targeted at seasonal pickers and farm workers.

**Posters.** The project produced a series of posters of the key safety targets as identified by the advisory committee and industry consultation. The posters have QR codes incorporated that link back to the appropriate video.

**Online course.** A thirty-minute online course has been developed that incorporates the key messages of both the Citrus Harvest manual. The course is aimed at workers with low English literacy and designed to be used primarily on a mobile device. The course has quiz questions interspersed throughout and provides a PDF certificate as evidence of completion that can be used for quality assurance programs.



## Results and discussion

### Survey results

The results from both the face to face and online surveys were relatively consistent. There were 15 different nationalities identified.

The highest WHS risks identified were incidents involving ladders and tractors. The most common injuries were cuts & scrapes.

All formats of resources were mentioned as being useful however video was the preferred method overall.

The PRG reviewed the survey results and considered other relevant information such as the Commonwealth of Australia 2020 National Agricultural Workforce Strategy and the ongoing issue of lack of mobility of labour and determined that the preferred languages for translation are for workers from the Pacific Islander and Seasonal Worker Program. These include Tongan, Bislama (Vanuatu) & Fijian.

Workers employed under these programs work directly with the employer rather than through labour hire companies. Further discussions with MAEDEEC were held after the PRG had met. MAEDC expressed that resources translated into Malay would be useful to them, particularly as this language is spoken in Brunei, Malaysia, east Timor, Singapore, parts of Thailand and southern Philippines. Malaysian was also identified as one of the most common languages spoken of seasonal workers in both the face to face and online surveys.

Because the project team was unable to travel throughout 2020/21, budget savings were used to get both oral & written translations of the video. It was not possible to source a Bislama speaker who could come into a studio for recording so only sub-titles are provided for that language. Tongan, Samoan and Malay video have been translated in full. A request was also made for east Timorese translations but a translator could not be provided in any capacity.

## Outputs

Table 1. Output summary

| Output   | Description  | Detail   |
|--|--|--|
| Australian Fresh Citrus Harvest Handbook   | Pocket manual helps pickers use the correct harvest methods and pick safer & faster  | This has been reviewed by SafeWork NSW and Industry representatives and updates made.<br>The manual has been translated into 4 languages Bislama, Malay, Tongan & Samoan   |
| Citrus Harvest Induction Manual  | Covers generics of worker induction including Rules of conduct, Health & Safety and harvest procedures   | This manual has been reviewed to ensure it meets the general induction requirements of citrus enterprises. It is available as a Word document so that it can be contextualized to each enterprise.   |
| Citrus safety posters  | 5 x Topics <ul style="list-style-type: none"> <li>• Harvest practice</li> <li>• Personal safety</li> <li>• Ladder safety</li> <li>• Ladder – moving</li> <li>• Picking safely</li> </ul> | 5 x Topics<br>Using images from the Citrus Harvest manual these posters highlight the key safety messages identified via consultation and survey.<br>Each poster uses a QR code to link to the relevant video to further reinforce learning.<br>They have been translated into Tongan, Samoan, Malay & Bislama and linked to the translated video  |
| Video – safety focused x 6 Topics<br><br>6 x Topics (Induction, Clothes, Picking, Mandarins, Ladder use, Safety), plus 1 combined file x 5 languages<br><br>English, Tongan, | 6 x Topics (Induction, Clothes, Picking, Mandarins, Ladder use, Safety), plus 1 combined file x 5 languages<br><br>English, Tongan,  | NSW DPI Citrus Harvest - English<br>Playlist<br><a href="https://youtube.com/playlist?list=PLa30fiiRFuoEjPIybBVY6mtm4hRQjyC20">https://youtube.com/playlist?list=PLa30fiiRFuoEjPIybBVY6mtm4hRQjyC20</a><br><br>NSW DPI Citrus Harvest - Bislama<br>Playlist <a href="https://youtube.com/playlist?list=PLa30fiiRFuoGnoGYb70-IXBSyjA0GUT-T">https://youtube.com/playlist?list=PLa30fiiRFuoGnoGYb70-IXBSyjA0GUT-T</a><br><br>NSW DPI Citrus Harvest - Malay<br>Playlist<br><a href="https://youtube.com/playlist?list=PLa30fiiRFuoFbhZvshKvitBdEZ66DL0BW">https://youtube.com/playlist?list=PLa30fiiRFuoFbhZvshKvitBdEZ66DL0BW</a><br><br>NSW DPI Citrus Harvest - Samoan<br>Playlist<br><a href="https://youtube.com/playlist?list=PLa30fiiRFuoE1GyyGVVrQVwhkkg-NO1YV">https://youtube.com/playlist?list=PLa30fiiRFuoE1GyyGVVrQVwhkkg-NO1YV</a> |
| Online course  | 56 slide course incorporating video and a quiz.<br><br>The course is fully narrated and includes English sub-  | A thirty-minute online course has been developed that incorporates the key messages of both the Citrus Harvest manual. The course is aimed at workers with low English literacy and designed to be used primarily on a mobile device. The course has quiz questions interspersed throughout and provides a PDF certificate as evidence of completion that can be used for quality assurance programs.  |

|                                   |  |  |
|-----------------------------------|--|--|
|                                   | <p>titles.</p> <p>The course is SCORM compliant and meets accessibility guidelines</p> |  |
| <p>Project management outputs</p> |  | <p>Program logic and evaluation plan</p> <p>Stakeholder engagement &amp; risk management plan</p> <p>Milestone reports</p> <p>Final report</p> |

## Outcomes

- Improved awareness of the need to practice safe Citrus harvest techniques and workplace health and safety
- Industry has increased skills, capacity and knowledge in WHS and the use of a range of training and extension methods particularly online learning

**Table 2. Outcome summary**

| Outcome   | Alignment to fund outcome, strategy and KPI                         | Description   | Evidence  |
|---|---|---|---|
| Improved access to WHS resources to increase knowledge of safe work practices | Citrus levy SIP Outcome 4<br>Increased skills, capacity & knowledge | Increased extension capability particularly in digital learning | SAfeWork review<br>Feedback from Technical Forum participants |

## Monitoring and evaluation

As the resources will not be used until the 2022 season it is not possible determine their use. Feedback will be taken and changes made accordingly, particularly for the online course. Consultation throughout the project with producers; the Project Reference Group; labour hire companies and government organisations such as SafeWork have ensured that the resources address the key Work Health & Safety issues during citrus harvest.

The key languages chosen for translation also went through the above consultation process. Consideration was also given to the likely impact of Covid-19 on labour availability and restricted national & international movement.

Accessibility has been addressed through ensuring all resources developed meet standards.

They are also being made available in print and electronic form with links to electronic site promoted via Citrus Australia and other industry communication channels.

**Table 3. Key Evaluation Questions**

| Key Evaluation Question  | Project performance   | Continuous improvement opportunities  |
|--|---|---|
| Are the resources being used for WHS training in Citrus?                                 | Not possible to evaluate as the 2022 harvest season is just beginning.  | Review of website and elearning course analytics  |
| Are the resources accessible and chosen translations on target?                          | All resources have been through a WCAG review and meet the guidelines<br><br>Languages chosen are relevant for current visa programs  | Further translation of more resources particularly the elearning module<br><br>Depending on outcome of new Agriculture Visa the required languages may change |
| Was the reach of the surveys sufficient?<br><br>Have the resources been promoted widely? | All major growing regions were surveyed but numbers were limited due to travel constraints. An online survey was released for pickers but there were no responses<br><br>Resources launched, displayed & distributed at Citrus Australia Technical Forum 2022; promotional material given to all Industry Development Officers. Resources freely available on NSW DPI website | Survey pickers and harvest contractors<br><br>targeted communication strategy would help dissemination activities   |
| What efforts did the project make to improve efficiency?                                 | Online meetings and surveys largely online interview or via social media<br><br>All resources going to translation at the one time  |   |

## Recommendations

The current labour shortage for horticulture workers in Australia has demonstrated that a dependence on targeted visa programs to meet the shortfall is highly likely to continue into the foreseeable future. The project recommends that continued access to quality training resources in appropriate languages be maintained.

Work Health & Safety resources for citrus packing were not developed in this project but could be considered in the future.

## Refereed scientific publications

Not applicable

## Intellectual property

The Citrus harvest handbook, Harvest Induction manual and associated videos remain the IP of NSW Department of Primary Industries.



## Acknowledgements

The project thanks the following for their support:

Vito Mancini -Riverbest Produce

Gary Pandolfo - Mario's Packhouse

Lyn Tonsing – KW Orchards

Sue Howie – SafeWork NSW

Kelvin Burgemeister – WHS Manager & HE Manager, Costa Group

MAEDEC

Citrus Australia

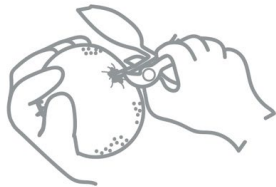
## Appendices

Samples of translated resources.



Department of  
Primary Industries

### Australian fresh citrus harvest handbook



English

Second edition 2021

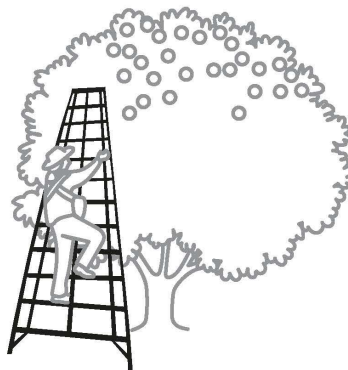
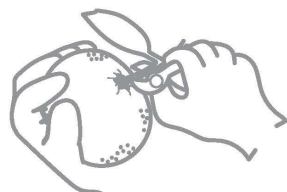
[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)



Department of  
Primary Industries

### Tohi Fakahinohino 'a 'Aositelelia fekau'aki mo e toli'o e situlasi' (citrus)



Tongan

Ko e Hiki hono Ua 2021

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

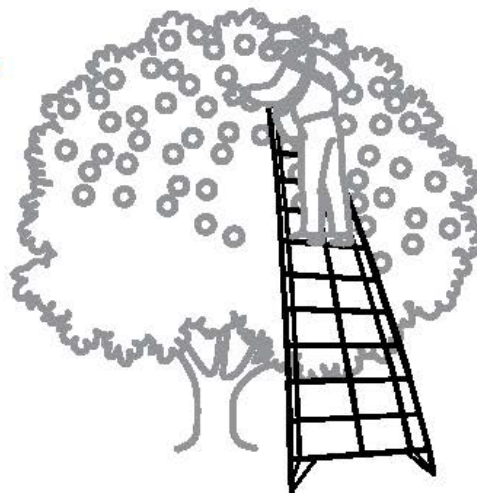
# Lada sefti

## Mekem sua se lada hem i stebol.

Pusum ol lek steiki ko insaed long kraon

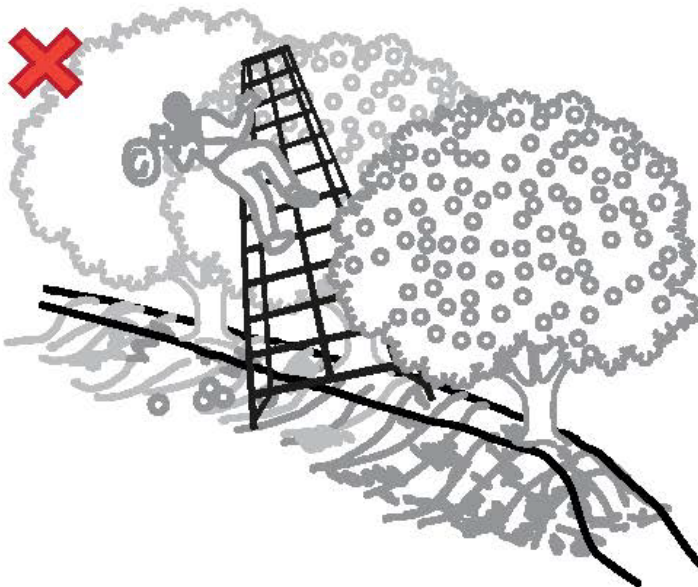
Mekem sua se lada hem i stanap strong akensem ol strong branj.

Pusum mo shekem lada bifo yu klaem blong jekem se hem i stebol.



Kipim hip blong yu andanit long top bong lada.

No pusum han blong karem samting we i stap longwe tumas long lada.



No putum lek blong lada long ol maon.

Blong ol tri we oli maonem olketa hem i moa gud blong yusum wan traepod lada we i kat wan lek haet we man i save jenjem folem tingting mo situeisen blong hem.

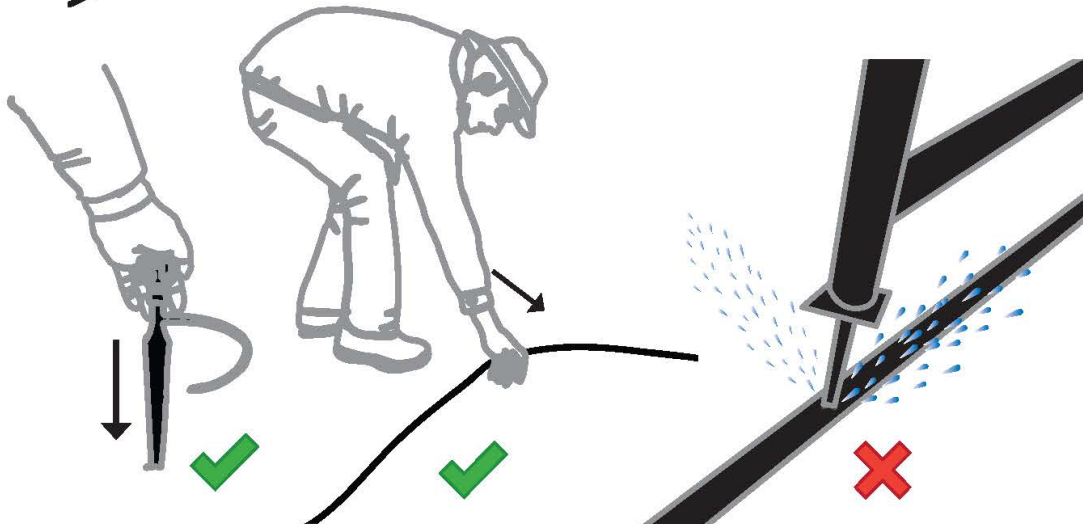
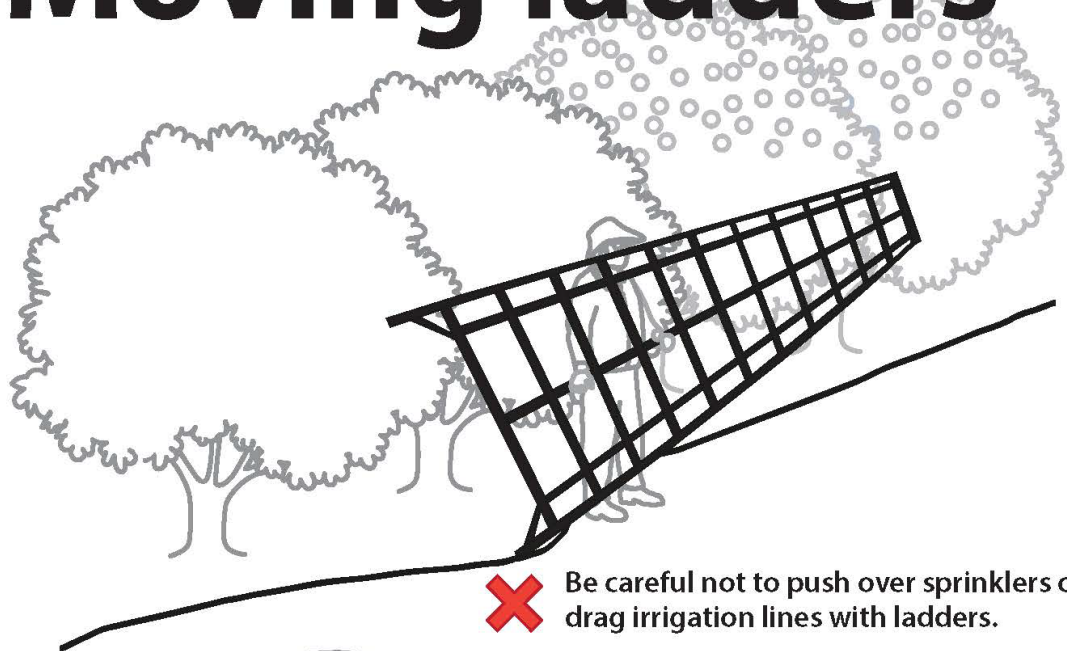
**Wajem ol vidio** ▶



BISLAMA

Total College\_120-021

# Moving ladders



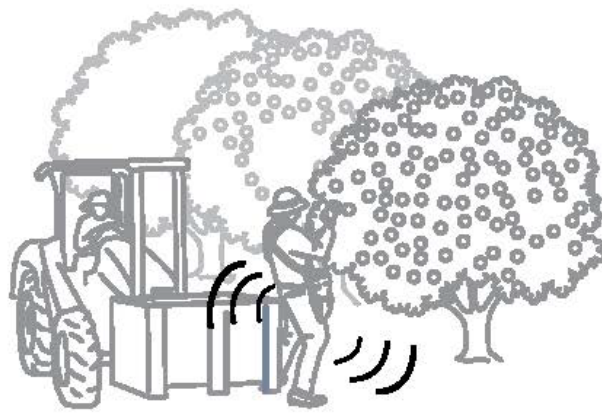
Total CollegeJ20-031

Sumber Rujukan Kesihatan dan Keselamatan Kerja Pemetikan Buah Sitrus

# Keselamatan Diri



Awasi dan dengar untuk traktor dan mesin jentera.



Jangan kerja jika tercedera, sakit atau tidak boleh melakukan kerja dengan tangan.



Basuh tangan dengan sabun selepas menggunakan tandas.



Basuh dan balut semua luka dan kelukaan.



MALAY



Tonton video ▶



Toad College\_ID0-031

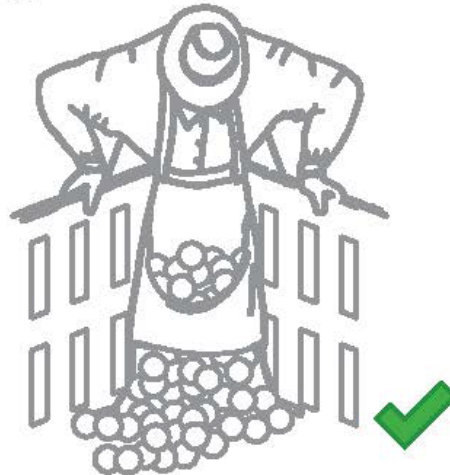


Mea faaaogāina mo le faatinoina o galuega mo le tauina o fualaau 'aina suamalie 'aati

# Saogalemū o le faiga o le piki



Aua le so'ona faatutumuina taga;



Tuu lemū fualaau 'aina suamalie i totonu o pini. Aua le faapa'ūūa.



To'otuli e piki ni fualaau 'aina suamalie o lo'o maualalo.



Alofia le tau 'aapa pe punou ifo e piki fualaau 'aina suamalie. Sôsô tele ia e latalata i fualaau 'aina suamalie.



Aua le mimiloa lou patua e te aapa ai i fualaau 'aina suamalie.



SAMOPN

Toad College\_ID0-031