

19-08 Horticulture Technology – Protected Horticulture



Summary of Feedback, Responses and Actions

March 2019

This project includes the development of 3 new qualifications, the review of 2 units of competency, and the development of 6 new units of competency within the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package*. Below is a list of the new qualifications developed for this draft phase:

- AHC2XX19 Certificate II in Protected Horticulture
- AHC3XX19 Certificate III in Protected Horticulture
- AHC4XX19 Certificate IV in Protected Horticulture

The list of new and reviewed units of competency:

- AHCPTH203 Support horticultural crop harvesting (which supersedes *AHCPTH203 Support horticultural crop harvesting*, minor changes to performance criteria and foundation skills)
- AHCSOL301 Prepare growing media (which supersedes *AHCSOL301 Prepare growing media*, minor changes to performance criteria and foundation skills)
- AHCXXX2XX Assist with protected cropping water sampling and testing (new unit)
- AHCXXX2XX Maintain crop (new unit)
- AHCXXX2XX Perform manual pollination of crops (new unit)
- AHCXXX2XX Perform plant blocking on (new unit)
- AHCXXX3XX Install and maintain vertical hanging trellis (new unit)
- AHCXXX4XX Establish and monitor hydroponic crops (new unit)

The major points of note regarding the new qualifications, new units and reviewed units are:

- The flexibility within the qualifications to allow for both streamed, vocation specific training (pickers, packers etc.) and generalist training. Both streams were identified and consulted on during the project and supported by the Subject Matter Expert Working Group and by personnel from industry and RTOs during the consultation workshops
- Distinction between these three qualifications and the Production Horticulture qualifications. As the protected horticulture industry grows, it was identified that industry specific qualifications needed to be developed to address the current skills and knowledge gaps

- New units have been developed to address the appropriate skills and knowledge gaps. Significant consultation was used in order to create these new units, with industry personnel, RTOs, key industry associations and government departments whereby feedback received has been supportive of these new units
- Industry facilities range from protected netting over a plant, to fully enclosed and controlled growing environments. Qualifications and units have been reviewed and developed to ensure that they cater for all aspects of the industry.

These qualifications and units of competency were developed and reviewed based on the extensive feedback received across Australia from stakeholders. Skills Impact would like to thank all who have given their time to provide feedback for this report.

The draft qualifications, including the new and redesigned units, were available for broader stakeholder consultation and feedback between 16 January and 15 February 2019. 76 responses were received, representing 5 Registered Training Organisations (National, NSW, SA, VIC and WA), one Curriculum Maintenance Manager (VIC), 5 industry (National, VIC and WA), 2 associations (National and WA), 5 government bodies (National and WA) such as State Training Authorities.

Below is a summary of the issues raised and how these issues have been dealt with. This involves a consideration of the information provided, views of industry stakeholders where known, and views provided by the people who are part of the Subject Matter Expert (SME) Working Group process. Resolutions are constructed to take into account the needs and views of stakeholders as far as possible, and to comply with the *Standards for Training Packages 2012*. The resolutions may represent a compromise on one or more stakeholder views with the aim of a workable outcome for industry, State and Territory Training Authorities (STAs) and training providers.

The units and qualifications are now available to view and validate on the [Skills Impact website](#) until 18 March 2019.

Stakeholders Comments and Identified Issues	Consideration and Proposed Resolution	
<p>AHC2XX19 Certificate II in Protected Horticulture</p> <p>The majority of feedback received for the Certificate II in Protected Horticulture supported the qualification structure, in particular the ability to undertake a stream that reflects the job roles of entry level workers in protected horticulture, or undertake the qualification as a generalist protected horticulture qualification.</p>		
<ul style="list-style-type: none"> Government, WA 	<p>Qualification description:</p> <p>Can the following be included into the description “Work must comply with work, health, safety, environmental and workplace legislation and regulations”? This will ensure all workplace issues i.e. EEO, Harassment and Fair Work are incorporated in the statement.</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. Its suitability for inclusion is currently being discussed.</p>
	<p>Unit Breakdown:</p> <p>There are a number of streams in the qualification and I am wondering why there needs to be so many? The qualification is entry level therefore would the learner not be exposed to some of the aspects of all the streams as part of their day-to-day work?</p>	<p>Feedback noted and taken for further discussion to the SME WG. Advice received from SME WG regarding this qualification is that the streams reflect the job roles of entry level workers in protected horticulture, they generally work in one of the defined areas of picking, packing, crop work or nursery under direct supervision. This is consistent with AQF 2 which summarises graduates at this level as having knowledge and skills for work in a defined context and/or further learning. The qualification packaging rules enables both the defined areas in protected horticulture as well as undertaking the qualification as a generalist protected horticulture qualification.</p>
<ul style="list-style-type: none"> Government, WA 	<p>Qualification Description, paragraph 2:</p> <p>Nice wording - use consistently in other Cert IIs.</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration.</p>
	<p>Qualification Description, paragraph 3:</p> <p>'with work health, safety, environmental and workplace regulations and legislation' would be my recommendation instead of what's there currently</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. Some states not referring to <i>work health and safety</i> but rather <i>occupational health and safety</i>. This has also been included in the Issues Register.</p>
	<p>Packaging Rules:</p>	<p>Feedback noted, SME WG advice sought. SME recommendation regarding this qualification is that the streams reflect the job roles of entry level workers in protected horticulture, and they generally work in one of</p>

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	<p>I am unclear why we need (all) these streams. What purpose do they serve? Level II is entry level training.</p> <p>In any case most pickers will also do packing and visa versa. Two streams (if even necessary) would be plenty: Picking/Packing and Crop.</p>	<p>the defined areas of picking, packing, crop work or nursery under direct supervision. This is consistent with AQF 2 which summarises graduates at this level as having knowledge and skills for work in a defined context and/or further learning. The qualification packaging rules enables both the defined areas in protected horticulture as well as undertaking the qualification as a generalist protected horticulture qualification.</p>
	<p>Core Units – FBPOPR2070 Apply quality systems and procedures:</p> <p>Although this Unit reads as quite routine, I suspect it will be well above expectations for a picker/packer Cert II level. OK as an elective.</p>	<p>Feedback noted, SME WG advice sought as we received some differing feedback regarding this unit. SME WG advised that the unit’s difficulty is at a Certificate II level, and that they recommend that it remain in the core list of units in the qualification.</p>
	<p>Elective Units, Group A – AHCPMG202 Treat plant, pests, diseases and disorders:</p> <p>I suspect that pickers might be encouraged to identify pests and diseases, but doubt that they would treat them. This Unit needs reconsideration. Okay as an elective.</p>	<p>Feedback noted, SME WG advice sought regarding this unit as we received some differing views during the feedback period. The SME WG checked the unit content and advise that this unit is reasonable for this stream and that they recommend it remains in this stream.</p>
	<p>Elective Units, Group B – FBPBPG2008 Perform basic packaging tests and inspections:</p> <p>Although this Unit reads as quite routine, I suspect it will be well above expectations for a picker/packer Cert II level. OK as an elective but not part of the stream (as is written).</p>	<p>Feedback noted, SME WG advice sought regarding this unit as we received some differing views during feedback. SME WG checked the unit content and advise that this unit is reasonable for this stream and that they recommend it remains in this stream.</p>
<ul style="list-style-type: none"> Industry, VIC 	<p>AHCPHT204 is the most appropriate unit from our perspective. (For grafting) FDFWGG2001A is far too prescriptive as it relates to Grapes, whilst FWPFGM2212 relates to grafting of mature trees. This might be relevant to a wholesale nursery, but not to protected horticulture.</p>	<p>Changes adopted whereby, FDFWGG2001A and FWPFGM2212 have been removed from Group D electives. <i>AHCPHT204 Undertake field budding and grafting retain</i>, and <i>FBPVIT2001 Bench graft vines</i> added to Group D electives.</p>
<ul style="list-style-type: none"> Government, National 	<p>Having a food safety unit in the Certificate II in critical</p>	<p>Feedback noted and already adopted, <i>FBPFSY2001 Implement the food safety program and procedures</i> in the core of the qualification.</p>

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<p>AHC3XX19 Certificate III in Protected Horticulture</p> <p>This level of worker in protected horticulture generally works in a defined area of picking, packing, crop work or nursery with broader skills, knowledge, autonomy and judgement in this defined area and limited responsibility. The majority of feedback received for the Certificate III in Protected Horticulture supported the qualification structure, in particular the ability to undertake a stream that reflects the job roles of this level of worker in protected horticulture, or to undertake the qualification as a generalist protected horticulture qualification.</p>		
<ul style="list-style-type: none"> Government, WA 	<p>Qualification description:</p> <p>Can the following be included into the description “Work must comply with work, health, safety, environmental and workplace legislation and regulations”? This will ensure all workplace issues i.e. EEO, Harassment and Fair Work are incorporated in the statement.</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. Some states not referring to <i>work health and safety</i> but rather <i>occupational health and safety</i>. This has been included in Issues Register.</p>
	<p>Is the expectation that this qualification will sit as an apprenticeship/traineeship level and if so should it be specific to a particular trade area i.e. nursery?</p>	<p>Feedback noted, and SME WG consulted to provide a clear answer. The SME WG outlined that the expectation is that this will not sit as an apprenticeship/traineeship as we have had no feedback requesting the creation of a trade style Certificate III qualification.</p>
<ul style="list-style-type: none"> Industry, VIC 	<p>AHCPHT306:</p> <p>Difficult to comment without knowing what performance and knowledge evidence needs to stay and why (In regards to using it or creating a new unit "Establish hydroponic crops". This unit has no relevance to hydroponic crops as stated. Possible re-write to broaden to scope of the unit by removing reference to soil??</p>	<p>Feedback noted, SME WG advice recommended retaining <i>AHCPHT306</i> in the Certificate III Group C electives for non-hydroponic crops, and developing a separate unit – <i>AHCXXX4XX Establish and monitor hydroponic crops</i> – for inclusion in the Group C electives of the Certificate III and Group A electives of the Certificate IV. This recommendation has been completed in line with the SME WG's advice.</p>
<ul style="list-style-type: none"> Government, WA 	<p>Qualification Description, paragraph 1:</p> <p>Given this is a Cert III qual which is often trade level and we have horticultural trades, these occupations are not equivalent to the level of the qual.</p> <p>Perhaps just nominate 'horticulture worker'?</p>	<p>Feedback noted, SME WG advice sought regarding paragraph 1 of the qualification description and whether or not the occupations listed should be removed in favour of the phrase 'horticulture worker'. The SME WG has told Skills Impact that the job roles listed reflect the main job roles at this level in the industry accurately, and that they wish for them to remain in the qualification's Qualification Descriptions, paragraph 1, instead of the phrase 'horticulture worker' as they offer a clearer picture of what job</p>

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		roles a graduate will be expected to perform than 'horticulture worker', which is too broad.
	<p>Qualification Description paragraph 2: Nice!! (Pickers and packers and assistants don't do this.)</p>	<p>Qualification Description paragraph 2 reads <i>Individuals with this qualification perform tasks involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting and operating equipment, coordinating resources and apply contingency measures during work.</i> The feedback is praising the qualification for accurately describing the job roles as they should be at this level, and not at the Certificate II level, as the stakeholder feels that this differentiation is not often well written in qualifications. The feedback has been noted.</p>
	<p>Qualification Description, paragraph 3: 'work health and safety and environment regulations' should include 'workplace laws and regulations (such as harassment)'.</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. Some states not referring to <i>work health and safety</i> but rather <i>occupational health and safety</i>. This has been included in the note on the Issues Register.</p>
	<p>Packaging Rules: Again. I am unconvinced that the proposed streaming provides any function. Moreover, a picker or a packer or a picker/packer is not at Cert III level anyway. At Cert III level the person would be expected to have broad skills.</p>	<p>Feedback noted, the SME WG advice sought regarding this qualification is that the streams reflect the job roles of this level of worker in protected horticulture who generally works in a defined area of picking, packing, crop work or nursery with broader skills, knowledge, autonomy and judgement in this defined area and limited responsibility. This is reflected in the streams, along with a range of units within the qualification structure (Group E) to enable broader relevant workplace skills. The AQF summarises graduates at this level as having theoretical and practical knowledge and skills for work and/or further learning. The qualification packaging rules enables both the specialist roles in protected horticulture as well as undertaking the qualification as a generalist protected horticulture qualification.</p>

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	<p>Core Units:</p> <p>There is no Unit here about quality (food safety is different) such as FBPOPR2070. Should be core.</p>	<p>Feedback adopted, SME WG advice was sought regarding this unit which has seen FBPOPR2070 added as a core unit and this has now seen the total core units in this qualification increase by one unit to (insert number now required).</p>
	<p><i>FBPOPR1010 Carry out manual handling tasks:</i></p> <p>Interesting inclusion in the core, but it is OK by me.</p>	<p>Feedback noted.</p>
	<p>Group C:</p> <p><i>AHCPHT306 Establish horticultural crops</i></p> <p><i>AHCPMG302 Control plant pests, diseases and disorders</i></p> <p><i>AHCXXX2XX Maintain crop</i></p> <p>Surely these are core for a Cert III in Protected Hort.</p> <p>I know this doesn't apply to picking and packing, but this qual should be broader than picking and packing.</p> <p>All should be core</p>	<p>Feedback noted, SME WG advice was sought regarding including these units in the core of the qualification. Advice received indicated that this would change the focus of the qualification to being a 'crop worker' and not the full spectrum of jobs or the broader skills at this level.</p>
<ul style="list-style-type: none"> Government, WA 	<p>Anything flagged for apprenticeships?</p>	<p>At this current time no; however, this qualification could potentially be delivered as a traineeship.</p>
<ul style="list-style-type: none"> Association, WA 	<p>Nothing in the qualifications on robotic harvesting or robotic picking.</p>	<p>Feedback noted, SME WG advice was sought regarding robotic harvesting/picking. Advice received indicated that there is potential for this in the near future, but it is very much early days for robotic harvesting/picking and will be identified at the appropriate time through the Skills Forecast as an inclusion in a future project by the Industry Reference Committee.</p>

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AHC4XX19 Certificate IV in Protected Horticulture		
The majority of feedback received for the Certificate IV in Protected Horticulture supported the qualification structure.		
<ul style="list-style-type: none"> Government, WA 	<p>Qualification description: Can the following be included into the description “Work must comply with work, health, safety, environmental and workplace legislation and regulations”? This will ensure all workplace issues i.e. EEO, Harassment and Fair Work are incorporated in the statement.</p> <p>Is this qualification for Supervisors as I made a note at the Workshop that this unit is directed at Technician?</p> <p>Unit Breakdown: The Core units seem to be focussed on team management and safety – should there be units in the core relevant to protected horticulture? FBPFSY3001 – Monitor the implementation of quality and food safety programs is listed but there is no specific unit on quality – is there a need for a unit covering this area?</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. Some states not referring to <i>work health and safety</i> but rather <i>occupational health and safety</i>. This has been included in the note on the Issues Register.</p> <p>Feedback noted, SME WG advice was sought regarding the level this qualification is aimed at and they have confirmed that this qualification is for the supervisory level. They advised that supervisors in the protected horticulture industry generally start off as workers then move up to a supervisory level and as such they would have the basic process skills gained from their experience as a worker and/or previous qualification.</p> <p>Feedback noted, SME WG were consulted to provide a response. SME WG have told Skills Impact that this qualification is for supervisors, and that supervisors in the protected horticulture industry generally start off as workers then move onto supervisor positions. As such, they would have the basic process skills gained from their experience as a worker and/or previous qualification. Their recommendation was to keep the core broad, and that students could select appropriate industry task electives to cover any gaps in skills or knowledge.</p> <p>The SME WG was consulted regarding <i>FBPFSY3001 Monitor the implementation of quality and food safety programs</i> and have informed Skills Impact that quality is covered within the unit adequately. They do not believe there is the need for another unit covering quality.</p>

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<ul style="list-style-type: none"> Industry, National 	<p>The Cert IV is good for supervisory level hires, but they might miss out on the basics that the Cert III provides on the processes themselves.</p>	<p>Feedback noted, SME WG advised that supervisors in the protected horticulture industry generally start off as workers then move into supervisory role, as such they would have the basic process skills gained from their experience as a worker and/or previous qualification.</p>
<ul style="list-style-type: none"> Government, WA, RTO, NSW 	<p>Core Units – <i>AHCWRK403 Supervise work routines and staff performance:</i></p> <p>While this is a good Unit, if this qual is for technicians as well a supervisors, they may not have staff or operational responsibilities, so this unit does not apply.</p> <p><i>BSBSMB407 Manage a small team</i> – same as comment for <i>AHCWRK403</i>, Unless you want to make this qual a supervision qual. If so is it different to other Cert IVs in Hort?</p>	<p>Feedback adopted, SME WG advice was sought regarding this qualification noting that this qualification is for supervisors. Therefore, technician has been removed from the qualification description and advice from the SMEWG is to keep <i>AHCWRK403</i> and <i>BSBSMB407</i> as core units.</p>
<ul style="list-style-type: none"> 	<p>Elective Units, Group A</p> <p><i>AHCPHT502 Develop a horticultural production plan</i></p> <p><i>AHCPMG409 Implement a pest management plan</i></p> <p>Both should be core</p>	<p>Feedback noted, SME WG advice was sought regarding including these units in the core of the qualification. Advice received indicated that these units are suitable for Group A as they would not be required of all job roles at this level.</p>
<ul style="list-style-type: none"> 	<p>Elective Units, Group B</p> <p><i>TAEDEL301 Provide work skill instruction</i></p> <p>You could add this to core, as a technician would be expected to train others.</p>	<p>Feedback noted, SME WG advice was sought regarding including this unit in the core of the qualification. SME WG recommended that this unit should be added to Group A electives. This recommendation has been adopted.</p>
<ul style="list-style-type: none"> Association, WA 	<p>How do you describe a technician?</p> <p>Qualification doesn't seem sure</p>	<p>Feedback adopted, SME WG advice was sought regarding this qualification and confirmed that this qualification is for supervisors, technician has therefore been removed from the qualification description.</p>
<p>General comments related to qualifications</p>		

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<ul style="list-style-type: none"> Industry, National 	<p>Consider including 'medicinal' as a stream in the protected cropping, rather than a separate qualification. Most of the Units included are relevant to the medicinal cannabis production context. The mix of units included in the draft Protected Cropping more closely aligns with the medicinal cannabis competency requirements than the Horticultural Production qualifications. That said a Horticulture Production qualification at cert 3 and 4 levels, when contextualized, will be adequate to produce competent workers in this industry.</p>	<p>This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration. SI has explained to stakeholder that medicinal stream would be better suited to the medical crop qualifications and units that are being developed in another project. Stakeholder thanked SI for this feedback.</p>
	<p>UoC specific:</p> <p>The core units could also be relevant for the medicinal cannabis production – with the possible swapping of <i>FBSY3001</i> (focused on quality and food safety) to a more generic unit such as <i>AHCWRK306</i> – comply with industry quality assurance requirements (at Cert 2 and Cert 4 levels as well).</p>	<p>This unit is relevant for protected horticulture, however a future medicinal crop project will be able to consider this feedback and action accordingly. This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration.</p>
<ul style="list-style-type: none"> RTO, VIC 	<p>I endorse the concept of a new training package for protected cropping and the alignment of relevant units.</p> <p>I like the lay out of the package so that it aligns to the different sectors with in protected cropping.</p> <p>The 6 new units are relevant, especially relating to crop work, however I feel that there are several other area that should also be considered for Protected Cropping.</p> <ol style="list-style-type: none"> Integrated Pest management, with the release and monitoring of the biological agents (beneficial insects) this plays an important part of our pest management strategy. Environmental control, every protected cropping enterprise will have some degree of modification of the growing environment. 	<p>Feedback noted, SME WG advice was sought regarding removal and disposal of old crop and hygiene procedures. SME WG felt that disposal of old crop and hygiene were covered in the biosecurity units within the qualifications. However, they recommended that these units be checked and if there was a gap then this issue should be placed on the Skills Impact Issues Register for consideration.</p> <p>SME suggestions regarding IPM and environmental control are covered in Group A of the Certificate IV - <i>AHCPHT503 Manage a controlled growing environment</i> and <i>AHCPMG409 Implement a pest management plan</i>.</p>

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	3. Removal and disposal of the old crop as well hygiene procedures, an important skill set.	
<ul style="list-style-type: none"> RTO, SA 	Does Protected Horticulture need a diploma? Should consult with wider industry as this might become more important over the coming years	Feedback noted, SME WG advice was sought regarding a diploma in protected horticulture. SME WG recommended to Skills Impact that as these are new qualifications, a cautious approach should be employed in terms of what type of qualifications should be created, and that the creation of a diploma might be premature. Their recommendation was that while they have received large amounts of feedback stating that a Certificate II, III and IV are needed by industry, and will receive large enrolment numbers, they felt that a diploma might not receive equal interest, and would come under the scrutiny of those bodies designed to review qualifications with poor enrolment numbers. Their strategy is to see how the current proposed qualifications fare in terms of enrolment numbers. If enrolment numbers are positive, and industry grows at its expected rate, they will then want to explore the option of creating a diploma level qualification.
	<p>Delivery of training requires access to specialised employment settings.</p> <p>Need to factor this in when creating assessment criteria. Greenhouses, certain water systems, etc.</p>	Feedback adopted. This has been factored into the Assessment Requirements (particularly Assessment Conditions) of the new units.
	Across all horticulture there is an issue with ASQA compliance, hence qualifications need to be flexible in their assessment conditions.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Association, WA 	Are these qualifications mirrored overseas? Should we be investigating this?	PEM industry report collected data indicating that there is very little structured training overseas, in particular most protected horticulture/hydroponic related courses/qualifications are targeted at higher level management skills or domestic growing. As such there isn't

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		anything specific at the Certificate II, III or IV level that can be mirrored for the Australian context.
<ul style="list-style-type: none"> Government, WA 	<p>Certificate II and Certificate III: Why have we gone down the path of streams? Doesn't this ignore dual roles? Streaming the qualifications does not seem wise</p>	SME WG asked to review this. The packaging rules of these qualifications enable them to be undertaken as generalist protected horticulture (i.e. not using an elective stream) or multiple streams. Therefore, you can undertake them to achieve dual roles in the industry without the need to undertake multiple qualifications for various roles.
<ul style="list-style-type: none"> RTO, WA 	Certificate III and IV packaging rules don't add up. Wording could use a tidy up.	Feedback adopted. Changed packaging rules to make them clearer to understand.
<ul style="list-style-type: none"> RTO, WA x 2 	There is a lot of overlap with Production Horticulture in the unit lists for all qualifications, though the new qualifications are strong.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Government, National 	Very happy with structure of all the Certificates.	Feedback noted, recommendation appreciated.
	Biggest existing knowledge gaps in the industry are around the Certificate II level for targeted positions. Pruners, pickers, packers.	Feedback noted, recommendation appreciated.
	For the future there should be a Protected Horticulture Diploma, but as long as material is being covered in existing Production Horticulture Diploma, it'll be enough until the area comes under review the next time.	Feedback noted, SME WG advice was sought regarding a diploma in protected horticulture. SME WG recommended to Skills Impact that as these are new qualifications, a cautious approach should be employed in terms of what type of qualifications should be created, and that the creation of a diploma might be premature. Their recommendation was that while they have received large amounts of feedback stating that a Certificate II, III and IV are needed by industry, and will receive large enrolment numbers, they felt that a diploma might not receive large interest, and would come under the scrutiny of those bodies designed to review qualifications with poor enrolment numbers. Their strategy is to

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		<p>see how the current proposed qualifications fare in terms of enrolment numbers. If enrolment numbers are positive, and industry grows at its expected rate, they will then want to explore the option of creating a diploma level qualification.</p> <p>SME WG is currently confident that the existing Production Horticulture diploma is adequate for their needs.</p>
<ul style="list-style-type: none"> Association, National 	Do some of the hydroponic units not expect too much from students in terms of knowledge of chemistry?	Feedback noted, SME WG advice was sought regarding chemistry demands. SME WG suggested that although there is a large 'chemistry' knowledge demand in the new unit, <i>AHCXXX4XX Establish and monitor hydroponic crop</i> , they feel that is it of a suitable standard for a Certificate IV level unit.
<ul style="list-style-type: none"> Association, National, Government NSW 	Need more irrigation units through all Certificates	Feedback adopted, Certificate II has <i>AHCIRG215</i> in the Group C electives, Certificate III has <i>AHCIRG303</i> in the Group E electives, Certificate IV has <i>AHCWAT502</i> in the Group A electives.
<ul style="list-style-type: none"> RTO, National 	Everything looks excellent. All Qualifications.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> RTO, National 	<p>Major gaps of knowledge and skills in the industry that need to be addressed in these qualifications are:</p> <ul style="list-style-type: none"> Urban food growing Domestic, non-professional growing The qualifications should look at targeting these markets as well 	Feedback noted, SME WG advice was sought regarding this feedback and the group advised that this would make the qualifications too broad and potentially unsuitable for commercial growing. They felt that this could lead to a weakening of the qualification structure and elective choices which would then detract from the qualification meeting the intended job outcomes.
<ul style="list-style-type: none"> RTO, National 	There should be a skill set or unit around Vertical Growing and making use of vertical space in a protected horticultural facility.	Feedback noted, SME WG advice was sought regarding this feedback and suggested that this is very capital intensive and do not see it being viable for the training package yet. Also, it would make the qualifications very broad, and potentially unsuitable for commercial growing. They felt that this could lead to a weakening of the qualification structure and

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		elective choices which would then detract from the qualification meeting the intended job outcomes.
<ul style="list-style-type: none"> Government, WA 	It's good that there is the scope within the qualifications to take different units across the horticulture field.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Industry, National 	Currently it's possible to pick all Group B units as the qualification doesn't specify how many needed to be taken from which stream of units.	Feedback adopted. The Certificate II and III have Group electives for streams and the packaging rules state how many units need to be undertaken to achieve the stream. The packaging rules also allow for a generalist protected horticulture qualification. The Certificate IV packaging rules now state how many units (6) must come from Group A.
<ul style="list-style-type: none"> Industry, National 	Are the biosecurity units too many and too repetitive?	Feedback noted, there is one biosecurity unit in the Certificate II (<i>AHCBIO201 Inspect and clean machinery for plant, animal and soil material</i>), one biosecurity unit in the Certificate III (<i>AHCBIO305 Apply biosecurity measures</i>), and no biosecurity units in the Certificate IV.
<ul style="list-style-type: none"> Industry, WA 	Nicely done so far and would be good to go after validation and moderation then its up to the RTO and Trainer.	Feedback noted, recommendation appreciated.
6 new and 2 revised units In general the units of competency were well-received and supported. Some individual units required additional work subsequent to the feedback to ensure they captured industry needs. These changes are listed below.		
AHCXXX2XX Assist with protected cropping water sampling and testing		
<ul style="list-style-type: none"> Industry, VIC 	This unit looks good. No suggested amendments.	Feedback noted, recommendation appreciated.

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
AHCXXX2XX Maintain crop		
<ul style="list-style-type: none"> Industry, VIC 	2.5 - Debud & prune plants could be removed. Not necessary to specifically name this task as pruning is one of 6 different tasks used to maintain the crop. Could generalise this to 'complete crop maintenance appropriate to crop requirements and conditions'.	Feedback adopted, performance criteria 2.5 changed to 'Use crop maintenance techniques appropriate to crop requirements and conditions', this change also reflected in the performance evidence and knowledge evidence.
<ul style="list-style-type: none"> Industry, VIC 	This unit looks good. No suggested amendments.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Industry, National 	Approves of <i>AHCXX2XXX Maintain crop</i> unit, and particularly liked the biosecurity mentions in the Evidence Knowledge.	Feedback noted, recommendation appreciated.
AHCXXX2XX Perform manual pollination of crops		
<ul style="list-style-type: none"> Industry, VIC 	This unit looks good. No suggested amendments.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Industry, National 	Approves of <i>AHCXXX2XX Perform manual pollination</i> .	Feedback noted, recommendation appreciated.
AHCXXX2XX Perform plant blocking on		
<ul style="list-style-type: none"> Industry, National 	Seems too specific and only covers one approach to propagation and cultivation. Maybe make this more generic – is it perform propagation and transplanting (using different methods and technique)??	Feedback noted. SME WG consulted on this issue. This is a specific technique that is different to other propagation techniques, the unit <i>AHCNSY203 Undertake propagation activities</i> covers general propagation activities, there is also the unit <i>AHCNSY202 Care for nursery plants</i> . Both of these units along with the " <i>AHCXXX2XX Perform plant blocking on</i> " are available in the nursery stream of the Certificate II in Protected Horticulture.

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
AHCXXX3XX Install and maintain vertical hanging trellis		
<ul style="list-style-type: none"> Industry, VIC 	Should the reference be to 'vertical trellis' throughout this unit to differentiate it from horizontal trellis in field and grapes.	Feedback adopted, all references to 'hanging trellis' changed to 'vertical hanging trellis' (including title of unit). Unit title also changed in <i>Certificate III in Protected Horticulture</i> .
<ul style="list-style-type: none"> RTO, SA 	Installation requirements for <i>AHCXXX3XX Install and maintain hanging trellis</i> cannot be assessed by RTOs.	Feedback noted, Installation of vertical hanging trellis is a primary activity of those workplaces that use vertical hanging trellis and as such demand for the creation of the unit was high. The Assessment Conditions were reviewed and the phrase <i>a workplace setting or an environment that accurately represents workplace conditions</i> has been accepted as open enough to allow for RTO's to successfully assess the unit. This was shown to the stakeholder and they have accepted the response.
<ul style="list-style-type: none"> RTO, SA 	For all units Assessment Requirements, replace 'Monitor' with 'Check'. Monitor is too ambiguous and has seen RTOs get in trouble with ASQA.	Feedback adopted, all protected horticulture units reviewed and replaced 'monitor' with 'check' where appropriate.
<ul style="list-style-type: none"> RTO, SA 	AHC Performance Criteria often say 'according to workplace procedures'. This is problematic as many workplaces don't have procedures.	Feedback adopted, all protected horticulture units reviewed and removed 'according to workplace procedures' where appropriate.
<ul style="list-style-type: none"> Industry, National 	Approves of <i>AHCXXX3XX Install and maintain vertical hanging trellis</i> .	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> Government, NSW 	Does trellis unit cover working at heights?	Feedback adopted. The elevated trolleys used for connecting the hanging trellis have a platform height of under 3 metres, they also have safety rails and the operator is clipped onto the rails.
<ul style="list-style-type: none"> Industry, National 	Hanging trellis unit successfully covers both kind of hanging trellis.	Feedback noted, recommendation appreciated.

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
AHCXXX4XX Establish and monitor hydroponic crops		
<ul style="list-style-type: none"> Industry, VIC 	Need to include 'drop irrigation' as a technique.	Feedback adopted, added 'drop irrigation' to knowledge evidence 'hydroponic crop nutrient solution techniques'.
<ul style="list-style-type: none"> Industry, VIC 	1.1 – This should not be blocking on substrate – should be 'growing' substrate if this unit relates to planting the crop in the greenhouse, otherwise it reads like a combination of nursery/greenhouse planting activities.	Feedback adopted, performance criteria 1.1 changed to 'Determine growing substrate according to crop type and workplace procedures', this change also reflected in performance criteria 1.4, foundation skills and knowledge evidence.
<ul style="list-style-type: none"> Industry, National 	<i>AHCXX4XXX Establish and monitor hydroponic crops</i> , Element 3 is out of numbering sync.	Feedback adopted, element 3, performance criteria renumbered.
<ul style="list-style-type: none"> Industry, National 	<i>AHCXX4XXX Establish Hydroponic Crops</i> – You're establishing the systems but there's nothing on plant health.	Feedback noted. Plant health is covered in a separate unit in the <i>Certificate IV in Protected Horticulture – AHCPCM501 Diagnose plant health problems</i> . There are also several other units in the qualification – <i>AHCNSY401 Plan a growing-on program</i> , <i>AHCNSY402 Plan a propagation program</i> , <i>AHCMCP401 Recommend plants and cultural practices</i> and <i>AHCPCM402 develop a soil health and plant nutrition program</i> .
<ul style="list-style-type: none"> RTO, National 	Code wrong in <i>AHCXXX4XX Establish and monitor hydroponic crops</i> . Need to go through to fix.	Feedback adopted, code numbering in unit corrected to 'AHCXXX4XX'.
General comments related to units		
<ul style="list-style-type: none"> Industry, VIC 	All units look marvellous, well done to Pete.	Feedback noted, recommendation appreciated.
<ul style="list-style-type: none"> RTO, National 	All new units are good and appropriate, especially their assessment conditions.	Feedback noted, recommendation appreciated.

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
<ul style="list-style-type: none"> Industry, National 	<p>UoC specific</p> <ul style="list-style-type: none"> AHC BIO302 Apply biosecurity measures – remove ‘farm’ to make it applicable to more controlled grow contexts FBPSY3001 Monitor the implementation of quality and food safety programs <ul style="list-style-type: none"> Why is it 'lead' at this level? Remove 'food' and it would be more relevant (maybe replace with 'product'). Does one exist specific to the pharmaceutical industry? AHCPHT306 and AHCPHT310 – horticultural crops <ul style="list-style-type: none"> change 'weather' to climate' for more applicability to controlled environments Change all references to ‘hydroponics’ to make more generally applicable to other modes of cultivation such as growing in soil, coconut coir, air! Etc using fertigation systems. Maybe change to ‘closed system’ crops? <ul style="list-style-type: none"> Case in point: AHCHYD301- Implement a maintenance program for hydroponic systems (focusing on fertigation and pressures and valves etc) replace hydroponic' with closed system', 'controlled' or 'grow' system Can cover fertigation – which includes nutrient solution and delivery systems AHCNSY401 <i>Plan a growing-on program:</i> Remove ‘-on’ so it is “Plan a grow program” or Plan a crop cycle, or something more generic like that. 	<p>These units are outside of the scope for this project. This feedback has been noted and has been placed on the Skills Impact Issues Register for consideration when these are reviewed as part of a future project.</p>
<ul style="list-style-type: none"> Industry, WA 	<p>Is there an existing unit we can use on Sand Filtration? If so, should be included, if not, should be created.</p>	<p>Feedback noted, SME WG advice was sought regarding sand filtration. As this is a quite specific area of filtration, it is not necessarily used broadly across protected horticulture. <i>FBPOPR2037 Operate a filtration process</i> unit content checked, this unit is relevant for general filtration in</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
		the industry and the unit has been added to the Certificate II Group E electives.