

Submission

by National Centre for Vocational Education Research (NCVER)

to

House of Representatives
Standing Committee on Agriculture, Fisheries and forestry

Inquiry into Rural Skills Training and Research

The National Centre for Vocational Education Research (NCVER) is in the business of collecting, analysing and broking information about vocational education and training (VET). The organisation is responsible for collecting and managing national VET and New Apprenticeship statistics, and managing national surveys of TAFE graduates and students, and employers' views of training. We undertake a strategic program of research, and collect and provide VET research findings from Australian and international sources through the Vocational Education and Training Research Database (VOCED).

Preamble

NCVER is pleased to provide background information to support this inquiry. Our submission mainly addresses the first two terms of reference, namely:

1. The availability and adequacy of education and research services in the agriculture sector, including access to vocational training and pathways from vocational education and training to tertiary education and work.
2. The skills needs of agricultural industries in Australia, including the expertise and capacity of industries to specify the skills-sets required for training, and the extent to which vocational training meets the needs of rural industries.

References are provided to reports derived from our research work and managed research programme. While some of this research is of a more general nature, it provides a broader perspective and context relevant to the key issues raised in this inquiry, and aspects of terms of reference 3 and 4. Relevant current research projects are also highlighted, and some statistics from NCVER's statistical collection are provided.

Response to terms of reference

1. *The availability and adequacy of education and research services in the agriculture sector, including access to vocational training and pathways from vocational education and training to tertiary education and work.*

Following are references to research that relates to the theme of adequacy, availability and access to vocational education and research in maintaining the viability, innovativeness and sustainability of Australian agriculture and other industries in rural and regional areas. The research identified also touches on the themes of educational pathways, rural community access to training and educational opportunities, and 'staged qualifications'.

Research reports

Clayton B, Blom K, Bateman A, and Carden P (2004) *What works where you are? The implementation of training packages in rural Australia*. NCVET, Adelaide, South Australia.

This research attempts to investigate the implementation of training packages in rural areas and the ways in which providers, community and industry stakeholders interact to achieve positive training outcomes.

The study examines the strategies being employed in five rural communities to ensure effective delivery of vocational education and training, particularly in situations where access to training infrastructure, or to a diversity of workplaces and work experiences, is limited.

Major drivers of training in communities, including the factors determining skills needs, are examined. The range of training delivered, types of courses, training packages and qualifications are also identified. Limitations relating to the implementation of training packages and training, and the barriers impacting on training delivery, are noted. Also included is an examination of the ways in which training providers are attempting to address the challenges they face.

This report can be found on the NCVET website at:
<http://www.ncver.edu.au/publications/1475.html>

Johns S, Kilpatrick S, Loechel B, and Prescott L (2004) *Pathways from rural schools: does school VET make a difference?* NCVET, Adelaide, South Australia.

The purpose of this research is to provide evidence of the medium-term outcomes for youth and their communities of vocational education and training (VET) programs delivered by rural schools. It aims to assess the community and individual impact of school VET programs in addressing rural community decline, and highlight implications for the VET sector, particularly in regional and rural Australia.

The study, involving a survey of former students from six rural school clusters in six states, investigates the extent of linkages between rural youth's participation in school VET programs, participation in post-school VET courses, labour market status, and their retention in their local communities. It examines the features of school VET programs delivered in rural schools that enhance skills acquisition, influence rural youth's participation in post-school VET courses, and influence the ability of rural youth to secure local employment within their chosen industry area. In addition, the study explores whether the outcomes of participation in rural school VET programs are the same as those reported for school VET programs more generally.

Conclusions are drawn regarding the potential of school-based VET programs in rural area to develop skills and pathways for the future workforce of rural Australia, and comments provided on what these pathways need to be more flexible to improve access to training and participation.

Although a pilot study, it is expected that knowledge gained from this study may be used by relevant industry and education bodies to inform the design, content and delivery of

VET programs in rural schools, and by policy makers to inform decisions in relation to the provision of VET services in rural communities.

This report, including a supporting document, is available on the NCVET website at: <http://www.ncver.edu.au/research/proj/nr1028.pdf> The supporting document can be found at: <http://www.ncver.edu.au/research/proj/nr1028s.pdf>

Kilpatrick S and Bound H (2003) *Learning online: Benefits and barriers in regional Australia*. NCVET, Adelaide, South Australia.

Central to this study are questions about the extent of uptake of online learning of formal vocational education and training (VET) in regional and metropolitan Australia, the benefits of and barriers to online learning for regional Australians, and how online learning and arrangements for its delivery may benefit regional communities.

The study focuses on what is happening in relation to online delivery in regional Australia and why it is happening. Data on recent and current enrolments in online courses/modules were gathered from eight providers across four states. The methodology included interviews with teachers, students and stakeholders.

Findings include aspects of the nature of online delivery, and the benefits, barriers and promoters of online learning. Suggestions are also made for further action.

This report is available in two volumes and can be found on the NCVET website at: <http://www.ncver.edu.au/publications/960.html>

Research in progress

The following references relate to research that is part of NCVET's managed research program. This research program is closely aligned with national research priorities and actions derived from the National Strategy for Vocational Education and Training 2004-2010, *Shaping our Future*.

Building learning communities: partnerships, social capital and VET performance

This research commenced on 1 July 2004 and is expected to be completed by 30 June 2005.

The project covers two streams of research, that of indicators and performance measures, and the role of VET and partnerships.

The study aims to establish a framework within which to locate VET and other organisations as part of the infrastructure required to build a learning community; develop a set of indicators that simultaneously evaluate the impact of VET and partnerships on the successful evolution of a diverse range of regional communities; and build the capacity of communities to evolve.

The research aims to answer the following questions:

- How do partnerships (including VET partnerships) contribute to social and economic development and does the impact vary across the diversity of landscape typologies?
- What is the nature of the relationship between the evolution of communities, social capital and partnerships?
- Can we build learning communities – if so, what are the essential ingredients?
- Are learning communities better equipped to adapt to changing environments?
- How does VET contribute to learning communities and what might VET's role be building future learning communities in different landscapes?

The study will make use of a multidimensional framework conceiving of partnerships and performance as one dimension on a matrix and landscape typologies (including the presence of VET) as a second dimension.

More details about this research can be found on the NCVET website at:

<http://www.ncver.edu.au/workinprogress/projects/10329.html>

Capturing community and VET potential – case studies in Victorian Local Governance Association (VLGA) cross-sectoral partnerships

This research commenced on 1 July 2004, and is expected to conclude on 30 June 2005.

The purpose of this research is to provide an in-depth understanding of the way some successful and varied projects have managed the partnering relationship to achieve significant community, education and economic goals with the support of the VLGA. The four case studies provide examples of projects at different stages of development, each with different community drivers, set in metropolitan and rural environments. The project will build upon current research within the field and test the observations and findings made by others.

The research aims to answer the following questions:

- How have opportunities for partnerships been conceived and negotiated?
- How has ownership among stakeholder groups been established and sustained?
- What has been the role of VET and how could it further enhance the project/s?
- What has been the role of the VLGA and how can similar bodies support new projects?
- How have the project/s maintained relevance as the pressures and drivers have changed?
- What can these projects teach others seeking education and training partnerships to realise social and economic goals?

More details about this research can be found on the NCVET website at:

<http://www.ncver.edu.au/workinprogress/projects/10328.html>

Regional vulnerability and opportunity: a national study of performance and determinants 1984-2003

This research commenced on 1 July 2004, and is expected to conclude on 30 June 2005.

The purpose of this study is to present a national landscape of regional and community vulnerability and resilience based on economic growth and competitiveness, and their social consequences, between 1984-2003, with perspective out to 2010. Eight case study regions will be used for this project.

It will identify the relative significance of eight underpinning drivers of these regional and community outcomes so that policy intervention measures, and reinforcing local and VET initiatives to build resilience and reduce vulnerability, can be more easily identified. The analysis of vulnerability and resilience and the relative impact of the drivers of change will be based around:

- (a) quantitative modelling across all regions – specified according to rules proposed through regional development theory, to ensure a logical connection between hypothesis and outcome and between analysis and policy, and
- (b) close consultation with regional stakeholders about the analytical results obtained in (a) to ensure behavioural factors are also taken into account, opportunities are identified, and policy and non-policy initiatives are identified.

The research aims to answer the following questions:

- What are the patterns of socio-economic vulnerability and opportunity in regions and communities across Australia to enable better targeting of initiatives?
- What are the drivers of vulnerability and opportunity to enable tailoring of specific policy and non-policy initiatives?
- How does current policy and practice impacting on the region relate to current theoretical analysis?
- What specific policy and non-policy local initiatives can be employed by governments, institutions, and local stakeholders to enhance regional community attributes?
- What role can VET play in improving its program delivery to regional communities on the basis of this analysis to (a) enhance human capital outcomes in the region; and (b) improve the efficiency and effectiveness of what it delivers?

More details about this research can be found on the NCVET website at:

<http://www.ncver.edu.au/workinprogress/projects/10332.html>

Schools, VET and partnerships: capacity building in rural and regional areas

This research commenced on 1 July 2004, and is expected to conclude on 31 December 2005.

This study will focus on the real life application of social capital concepts in school-VET partnerships that demonstrate success in building social and economic capital in rural communities and regions. Its purpose is to provide an outline and analysis of the models and processes chosen (or developed) and implemented by these rural and regional

communities, highlighting factors that shape decision-making in finding an appropriate fit between models, processes and local contexts.

The specific question that relates to the research purpose and will guide the project is: How do school-VET partnerships contribute to community capacity building in rural and regional areas as demonstrated through reported change in social and economic capital?

More details about this research can be found on the NCVET website at:
<http://www.ncver.edu.au/workinprogress/projects/10323.html>

Skilling a seasonal workforce: a way forward for rural regions

This research commenced on 5 September 2003 and is scheduled for completion by 30 June 2005.

The purpose of this research is to investigate employer provision of training to meet the needs of seasonal workers within two geographic regions. The study will investigate barriers and enhancers to the provision of training by employers and of participation for employees and identify the fit between current VET provision and needs.

The research aims to answer the following questions:

- What training is being undertaken by seasonal workers in two regional areas?
 - Which industries and industry sectors are employing seasonal workers, and which are accessing training or employing trained workers?
 - Who is delivering training?
 - What training is being delivered, including the use made of Training Packages (or part thereof)?
 - To what extent are the skills required and delivered in training common to more than one industry or industry sector?
 - What are the skill gaps for casual seasonal workers that could be addressed through training?
- What are the factors that enhance and inhibit use of structured training to meet the training needs of seasonal workers and their employers? What is the potential for cross-industry qualifications to meet these training needs?
- What roles can regional industry and government personnel play in developing a 'community of practice' to address training needs for seasonal workers?

More details about this research can be found on the NCVET website at:
<http://www.ncver.edu.au/workinprogress/projects/10238.html>

Statistics

The following tables are derived from NCVET's statistical collections and indicate vocational education and training activity in the agriculture sector.

The agriculture sector in the VET provider collection has been defined by Field of Education of the course (which describes the main area related to the course).

New Apprenticeship data have been broken down by ASCO (occupational level) because each apprentice and trainee has a contract of training which designates the specific occupation that they are being trained for.

Additional tables on training packages by field of education and level of education have been included for more detail.

A training package is defined as an integrated set of standards, guidelines and qualifications for training and assessing and recognising people's skills, developed by industry to meet the needs of an industry or group of industries.

Vocational education and training activity

Number of VET course enrolments by field of education (05 – Agriculture, Environmental and Related Studies) and level of education (Certificate 1 and higher), 2003

| Field of Education | Diploma or higher | Certificate IV | Certificate III | Certificate II | Certificate I | Total |
|---|-------------------|----------------|-----------------|----------------|---------------|---------------|
| 0501 - Agriculture | 2,418 | 3,399 | 4,494 | 9,551 | 461 | 20,323 |
| 0503 - Horticulture and Viticulture | 2,537 | 3,209 | 14,213 | 15,113 | 3,542 | 38,614 |
| 0505 - Forestry Studies | 39 | 150 | 2,193 | 3,706 | 157 | 6,245 |
| 0507 - Fisheries Studies | 143 | 179 | 1,082 | 559 | 76 | 2,039 |
| 0509 - Environmental Studies | 2,047 | 1,609 | 1,541 | 3,257 | 220 | 8,674 |
| 0599 - Other Agriculture, Environmental and Related Studies | 0 | 3 | 735 | 1,197 | 98 | 2,033 |
| TOTAL AGRICULTURE, ENVIRONMENTAL AND RELATED STUDIES | 7,184 | 8,549 | 24,258 | 33,383 | 4,554 | 77,928 |

Number of VET awards completed in 2003 by field of education (05 – Agriculture, Environmental and Related Studies) and level of education (Certificate 1 and higher) (as reported in 2003)

| Field of Education | Diploma or higher | Certificate IV | Certificate III | Certificate II | Certificate I | Total |
|---|-------------------|----------------|-----------------|----------------|---------------|---------------|
| 0501 - Agriculture | 201 | 614 | 918 | 1,349 | 83 | 3,165 |
| 0503 - Horticulture and Viticulture | 368 | 297 | 1,812 | 2,093 | 419 | 4,989 |
| 0505 - Forestry Studies | 11 | 22 | 174 | 359 | 19 | 585 |
| 0507 - Fisheries Studies | 41 | 13 | 145 | 101 | 8 | 308 |
| 0509 - Environmental Studies | 251 | 157 | 251 | 641 | 45 | 1,345 |
| 0599 - Other Agriculture, Environmental and Related Studies | 0 | 3 | 54 | 331 | 6 | 394 |
| TOTAL AGRICULTURE, ENVIRONMENTAL AND RELATED STUDIES | 872 | 1,106 | 3,353 | 4,874 | 580 | 10,786 |

Number of VET course enrolments in training packages by field of education (05 – Agriculture, Environmental and Related Studies) where the level of education is Certificate I or above, 2003

| Training package | 0501 - Agriculture | | 0503 - Horticulture and Viticulture | | 0505 - Forestry Studies | | 0507 - Fisheries Studies | | 0509 - Environmental and Related Studies | | 0599 - Other Agriculture, Environmental and Related Studies | | TOTAL 05 |
|---|--------------------|--------------------|-------------------------------------|--------------------|-------------------------|-------------------------|--------------------------|--------------------------|--|--|---|---|--------------|
| | 0501 - Agriculture | 0501 - Viticulture | 0503 - Horticulture | 0503 - Viticulture | 0505 - Forestry Studies | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0507 - Fisheries Studies | 0509 - Environmental and Related Studies | 0509 - Environmental and Related Studies | 0599 - Other Agriculture, Environmental and Related Studies | 0599 - Other Agriculture, Environmental and Related Studies | |
| DFD - Food Processing Industry | | | | | | | | | | | | | |
| DFD10498 - Certificate I in Food Processing (Wine) | 0 | 548 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 548 |
| DFD20498 - Certificate II in Food Processing (Wine) | 0 | 1,639 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,639 |
| DFD30498 - Certificate III in Food Processing (Wine) | 0 | 1,325 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,325 |
| Total - DFD - Food Processing Industry | 0 | 3,512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,512 |
| FPI - Forest and Forest Products Industry | | | | | | | | | | | | | |
| FPI10199 - Certificate I in Forest & Forest Products (General) | 0 | 0 | 0 | 0 | 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| FPI20199 - Certificate II in Forest & Forest Products (Forest Growing & Management) | 0 | 0 | 0 | 0 | 2,317 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,317 |
| FPI20299 - Certificate II in Forest & Forest Products (Wood Panel Products) | 0 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| FPI20399 - Certificate II in Forest & Forest Products (Harvesting) | 0 | 0 | 0 | 0 | 170 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 170 |
| FPI20499 - Certificate II in Forest & Forest Products (Timber Manufactured Products) | 0 | 0 | 0 | 0 | 175 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 175 |
| FPI20699 - Certificate II in Forest & Forest Products (Sawmilling & Processing) | 0 | 0 | 0 | 0 | 918 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 918 |
| FPI30199 - Certificate III in Forest & Forest Products (Forest Growing & Management) | 0 | 0 | 0 | 0 | 918 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 918 |
| FPI30299 - Certificate III in Forest & Forest Products (Wood Panel Products) | 0 | 0 | 0 | 0 | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| FPI30399 - Certificate III in Forest & Forest Products (Harvesting) | 0 | 0 | 0 | 0 | 501 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 501 |
| FPI30499 - Certificate III in Forest & Forest Products (Timber Manufactured Products) | 0 | 0 | 0 | 0 | 206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 206 |
| FPI30699 - Certificate III in Forest & Forest Products (Sawmilling & Processing) | 0 | 0 | 0 | 0 | 392 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 392 |
| FPI40199 - Certificate IV in Forest & Forest Products (Forest Growing & Management) | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| FPI40299 - Certificate IV in Forest & Forest Products (Wood Panel Products) | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| FPI40399 - Certificate IV in Forest & Forest Products (Harvesting) | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| FPI40499 - Certificate IV in Forest & Forest Products (Timber Manufactured Products) | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| FPI40699 - Certificate IV in Forest & Forest Products (Sawmilling & Processing) | 0 | 0 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| FPI50199 - Diploma of Forest & Forest Products (Forest Growing & Management) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FPI50699 - Diploma of Forest & Forest Products (Sawmilling & Processing) | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Total - FPI - Forest and Forest Products Industry | 0 | 0 | 0 | 0 | 6,172 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,172 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environment Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|---|-----------------------|--|-------------------------------|--------------------------------|----------------------------------|---|--------------|
| HLT - Health | | | | | | | |
| HLT20402 - Certificate II in Health Support Services (Grounds Maintenance) | 0 | 1,005 | 0 | 0 | 0 | 0 | 1,005 |
| Total HLT - Health | 0 | 1,005 | 0 | 0 | 0 | 0 | 1,005 |
| NWP - Water Industry | | | | | | | |
| NWP20101 - Certificate II in Water Industry Operations | 0 | 0 | 0 | 0 | 302 | 0 | 302 |
| NWP30101 - Certificate III in Water Industry Operations | 0 | 0 | 0 | 0 | 124 | 0 | 124 |
| NWP40101 - Certificate IV in Water Industry Operations | 0 | 0 | 0 | 0 | 36 | 0 | 36 |
| Total NWP - Water Industry | 0 | 0 | 0 | 0 | 462 | 0 | 462 |
| PRM - Asset Maintenance | | | | | | | |
| PRM20298 - Certificate II in Asset Maintenance (Pest Management - Technical) | 0 | 0 | 0 | 0 | 0 | 908 | 908 |
| PRM30298 - Certificate III in Asset Maintenance (Pest Management - Technical) | 0 | 0 | 0 | 0 | 0 | 734 | 734 |
| PRM40298 - Certificate IV in Asset Maintenance (Pest Management) | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Total PRM - Asset Maintenance | 0 | 0 | 0 | 0 | 0 | 1,645 | 1,645 |
| RGR - Racing Industry | | | | | | | |
| RGR10199 - Certificate I in Racing (Thoroughbred) | 28 | 0 | 0 | 0 | 0 | 0 | 28 |
| RGR20102 - Certificate II in Racing (Stablehand) | 19 | 0 | 0 | 0 | 0 | 0 | 19 |
| RGR20198 - Certificate II in Racing (Thoroughbred) - Stablehand Level 1 | 172 | 0 | 0 | 0 | 0 | 0 | 172 |
| RGR20298 - Certificate II in Racing (Standardbred) - Stablehand Level 1 | 29 | 0 | 0 | 0 | 0 | 0 | 29 |
| RGR20398 - Certificate II in Racing (Greyhound) - Kennelhand Level 1 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| RGR30198 - Certificate III in Racing (Thoroughbred) - Stablehand Level 2 | 104 | 0 | 0 | 0 | 0 | 0 | 104 |
| RGR30202 - Certificate III in Racing (Advanced Stablehand) | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| RGR30398 - Certificate III in Racing (Standardbred) - Stablehand Level 2 | 65 | 0 | 0 | 0 | 0 | 0 | 65 |
| Total - RGR - Racing Industry | 424 | 0 | 0 | 0 | 0 | 0 | 424 |
| RTD - Conservation and Land Management | | | | | | | |
| RTD - Conservation and Land Management | 0 | 0 | 0 | 0 | 4,610 | 0 | 4,610 |
| RTD10102 - Certificate I in Conservation and Land Management | 0 | 0 | 0 | 0 | 186 | 0 | 186 |
| RTD20102 - Certificate II in Conservation and Land Management | 0 | 0 | 0 | 0 | 1,998 | 0 | 1,998 |
| RTD30102 - Certificate III in Conservation and Land Management | 0 | 0 | 0 | 0 | 1,060 | 0 | 1,060 |
| RTD40102 - Certificate IV in Conservation and Land Management | 0 | 0 | 0 | 0 | 699 | 0 | 699 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environmental Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|--|-----------------------|--|-------------------------------|--------------------------------|------------------------------------|---|--------------|
| RTD50102 - Diploma of Conservation and Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 652 |
| RTD60102 - Advanced Diploma of Conservation and Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Total - RTD - Conservation and Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 4,610 |
| RTE - Rural Production | | | | | | | |
| RTE20103 - Certificate II in Agriculture | 68 | 0 | 0 | 0 | 0 | 0 | 68 |
| RTE20603 - Certificate II in Production Horticulture | 0 | 13 | 0 | 0 | 0 | 0 | 13 |
| RTE20703 - Certificate II in Rural Operations | 7 | 0 | 0 | 0 | 0 | 0 | 7 |
| RTE30103 - Certificate III in Agriculture | 35 | 0 | 0 | 0 | 0 | 0 | 35 |
| RTE30203 - Certificate III in Agriculture (Beef Production) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RTE30403 - Certificate III in Agriculture (Dairy Production) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RTE30703 - Certificate III in Agriculture (Horse Breeding) | 19 | 0 | 0 | 0 | 0 | 0 | 19 |
| RTE31503 - Certificate III in Shearing | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| RTE31903 - Certificate III in Rural Operations | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| RTE40103 - Certificate IV in Agriculture | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RTE40503 - Certificate IV in Production Horticulture | 22 | 0 | 0 | 0 | 0 | 0 | 22 |
| RTE50103 - Diploma of Agriculture | 12 | 0 | 0 | 0 | 0 | 0 | 12 |
| Total RTE - Rural Production | 176 | 13 | 0 | 0 | 0 | 0 | 189 |
| RTF - Amenity Horticulture | | | | | | | |
| RTF10103 - Certificate I in Horticulture | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| RTF20103 - Certificate II in Horticulture | 0 | 346 | 0 | 0 | 0 | 0 | 346 |
| RTF20503 - Certificate II in Horticulture (Retail Nursery) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RTF30103 - Certificate III in Horticulture | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| Total RTF - Amenity Horticulture | 0 | 367 | 0 | 0 | 0 | 0 | 367 |
| RUA - Agriculture | | | | | | | |
| RUA10198 - Certificate I in Agriculture | 367 | 0 | 0 | 0 | 0 | 0 | 367 |
| RUA10298 - Certificate I in Agriculture (Beef Cattle Production) | 47 | 0 | 0 | 0 | 0 | 0 | 47 |
| RUA10498 - Certificate I in Agriculture (Dairy) | 17 | 0 | 0 | 0 | 0 | 0 | 17 |
| RUA10798 - Certificate I in Agriculture (Horse Breeding) | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| RUA20198 - Certificate II in Agriculture | 4,364 | 0 | 0 | 0 | 0 | 0 | 4,364 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environmental Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|---|-----------------------|--|-------------------------------|--------------------------------|------------------------------------|---|----------|
| RUA20298 - Certificate II in Agriculture (Beef Cattle Production) | 808 | 0 | 0 | 0 | 0 | 0 | 808 |
| RUA20498 - Certificate II in Agriculture (Dairy) | 277 | 0 | 0 | 0 | 0 | 0 | 277 |
| RUA20598 - Certificate II in Agriculture (Goat Production) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RUA20698 - Certificate II in Agriculture (Grain Production) | 0 | 16 | 0 | 0 | 0 | 0 | 16 |
| RUA20798 - Certificate II in Agriculture (Horse Breeding) | 41 | 0 | 0 | 0 | 0 | 0 | 41 |
| RUA20998 - Certificate II in Agriculture (Pig Production) | 153 | 0 | 0 | 0 | 0 | 0 | 153 |
| RUA21098 - Certificate II in Agriculture (Poultry Production) | 22 | 0 | 0 | 0 | 0 | 0 | 22 |
| RUA21298 - Certificate II in Agriculture (Rural Merchandising) | 68 | 0 | 0 | 0 | 0 | 0 | 68 |
| RUA21398 - Certificate II in Agriculture (Sheep and Wool) | 77 | 0 | 0 | 0 | 0 | 0 | 77 |
| RUA21498 - Certificate II in Agriculture (Wool Handling) | 647 | 0 | 0 | 0 | 0 | 0 | 647 |
| RUA21598 - Certificate II in Agriculture (Sugar Cane Production) | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| RUA21698 - Certificate II in Agriculture (Production Horticulture) | 0 | 40 | 0 | 0 | 0 | 0 | 40 |
| RUA22498 - Certificate II in Agriculture (Shearing) | 719 | 0 | 0 | 0 | 0 | 0 | 719 |
| RUA22598 - Certificate II in Agriculture (Cane Cultivation) | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| RUA23598 - Certificate II in Agriculture (Cane Haulage) | 12 | 0 | 0 | 0 | 0 | 0 | 12 |
| RUA24598 - Certificate II in Agriculture (Cane Harvesting) | 0 | 10 | 0 | 0 | 0 | 0 | 10 |
| RUA30198 - Certificate III in Agriculture | 1,592 | 0 | 0 | 0 | 0 | 0 | 1,592 |
| RUA30298 - Certificate III in Agriculture (Beef Cattle Production) | 382 | 0 | 0 | 0 | 0 | 0 | 382 |
| RUA30398 - Certificate III in Agriculture (Cotton Production) | 0 | 39 | 0 | 0 | 0 | 0 | 39 |
| RUA30498 - Certificate III in Agriculture (Dairy) | 267 | 0 | 0 | 0 | 0 | 0 | 267 |
| RUA30698 - Certificate III in Agriculture (Grain Production) | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| RUA30798 - Certificate III in Agriculture (Horse Breeding) | 114 | 0 | 0 | 0 | 0 | 0 | 114 |
| RUA30998 - Certificate III in Agriculture (Pig Production) | 139 | 0 | 0 | 0 | 0 | 0 | 139 |
| RUA31098 - Certificate III in Agriculture (Poultry Production) | 56 | 0 | 0 | 0 | 0 | 0 | 56 |
| RUA31298 - Certificate III in Agriculture (Rural Merchandising) | 523 | 0 | 0 | 0 | 0 | 0 | 523 |
| RUA31398 - Certificate III in Agriculture (Sheep and Wool) | 19 | 0 | 0 | 0 | 0 | 0 | 19 |
| RUA31498 - Certificate III in Agriculture (Clip Preparation) | 255 | 0 | 0 | 0 | 0 | 0 | 255 |
| RUA31598 - Certificate III in Agriculture (Sugar Cane Production) | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| RUA31698 - Certificate III in Agriculture (Production Horticulture) | 0 | 103 | 0 | 0 | 0 | 0 | 103 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environmental Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|---|-----------------------|--|-------------------------------|--------------------------------|------------------------------------|---|---------------|
| RUA33598 - Certificate III in Agriculture (Cane Haulage) | 81 | 0 | 0 | 0 | 0 | 0 | 81 |
| RUA40198 - Certificate IV in Agriculture | 1,491 | 0 | 0 | 0 | 0 | 0 | 1,491 |
| RUA40298 - Certificate IV in Agriculture (Beef Cattle Production) | 137 | 0 | 0 | 0 | 0 | 0 | 137 |
| RUA40398 - Certificate IV in Agriculture (Cotton Production) | 0 | 15 | 0 | 0 | 0 | 0 | 15 |
| RUA40498 - Certificate IV in Agriculture (Dairy) | 386 | 0 | 0 | 0 | 0 | 0 | 386 |
| RUA40598 - Certificate IV in Agriculture (Goat Production) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RUA40698 - Certificate IV in Agriculture (Grain Production) | 0 | 71 | 0 | 0 | 0 | 0 | 71 |
| RUA40798 - Certificate IV in Agriculture (Horse Breeding) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RUA40998 - Certificate IV in Agriculture (Pig Production) | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| RUA41098 - Certificate IV in Agriculture (Poultry Production) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RUA41298 - Certificate IV in Agriculture (Rural Merchandising) | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| RUA41398 - Certificate IV in Agriculture (Sheep and Wool) | 13 | 0 | 0 | 0 | 0 | 0 | 13 |
| RUA41498 - Certificate IV in Agriculture (Wool Classing) | 1,007 | 0 | 0 | 0 | 0 | 0 | 1,007 |
| RUA50198 - Diploma of Agriculture | 1,494 | 0 | 0 | 0 | 0 | 0 | 1,494 |
| RUA50298 - Diploma of Agriculture (Beef Cattle Production) | 62 | 0 | 0 | 0 | 0 | 0 | 62 |
| RUA50398 - Diploma of Agriculture (Cotton Production) | 0 | 38 | 0 | 0 | 0 | 0 | 38 |
| RUA50498 - Diploma of Agriculture (Dairy) | 204 | 0 | 0 | 0 | 0 | 0 | 204 |
| RUA50598 - Diploma of Agriculture (Goat Production) | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| RUA50698 - Diploma of Agriculture (Grain Production) | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| RUA51398 - Diploma of Agriculture (Sheep and Wool) | 43 | 0 | 0 | 0 | 0 | 0 | 43 |
| RUA60198 - Advanced Diploma of Agriculture | 195 | 0 | 0 | 0 | 0 | 0 | 195 |
| RUA60498 - Advanced Diploma of Agriculture (Dairy) | 57 | 0 | 0 | 0 | 0 | 0 | 57 |
| Total RUA - Agriculture | 16,150 | 349 | 0 | 0 | 0 | 0 | 16,499 |
| RUH - Horticulture | | | | | | | |
| RUH10198 - Certificate I in Horticulture | 0 | 1,846 | 0 | 0 | 0 | 0 | 1,846 |
| RUH10398 - Certificate I in Horticulture (Floriculture) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RUH10498 - Certificate I in Horticulture (Landscape) | 0 | 330 | 0 | 0 | 0 | 0 | 330 |
| RUH10598 - Certificate I in Horticulture (Nursery) | 0 | 159 | 0 | 0 | 0 | 0 | 159 |
| RUH10698 - Certificate I in Horticulture (Parks and Gardens) | 0 | 561 | 0 | 0 | 0 | 0 | 561 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environmental Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|--|-----------------------|--|-------------------------------|--------------------------------|------------------------------------|---|----------|
| RUH10798 - Certificate I in Horticulture (Turf Management) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RUH10898 - Certificate I in Horticulture (Production) | 0 | 82 | 0 | 0 | 0 | 0 | 82 |
| RUH20198 - Certificate II in Horticulture | 0 | 6,767 | 0 | 0 | 0 | 0 | 6,767 |
| RUH20298 - Certificate II in Horticulture (Arboriculture) | 0 | 442 | 0 | 0 | 0 | 0 | 442 |
| RUH20398 - Certificate II in Horticulture (Floriculture) | 0 | 32 | 0 | 0 | 0 | 0 | 32 |
| RUH20498 - Certificate II in Horticulture (Landscape) | 0 | 830 | 0 | 0 | 0 | 0 | 830 |
| RUH20598 - Certificate II in Horticulture (Nursery) | 0 | 813 | 0 | 0 | 0 | 0 | 813 |
| RUH20698 - Certificate II in Horticulture (Parks and Gardens) | 0 | 1,275 | 0 | 0 | 0 | 0 | 1,275 |
| RUH20798 - Certificate II in Horticulture (Turf Management) | 0 | 355 | 0 | 0 | 0 | 0 | 355 |
| RUH20898 - Certificate II in Horticulture (Production) | 0 | 1,330 | 0 | 0 | 0 | 0 | 1,330 |
| RUH20901 - Certificate II in Rural Operations | 157 | 193 | 0 | 0 | 0 | 0 | 350 |
| RUH30198 - Certificate III in Horticulture | 0 | 4,435 | 0 | 0 | 0 | 0 | 4,435 |
| RUH30298 - Certificate III in Horticulture (Arboriculture) | 0 | 577 | 0 | 0 | 0 | 0 | 577 |
| RUH30398 - Certificate III in Horticulture (Floriculture) | 0 | 24 | 0 | 0 | 0 | 0 | 24 |
| RUH30498 - Certificate III in Horticulture (Landscape) | 0 | 2,347 | 0 | 0 | 0 | 0 | 2,347 |
| RUH30598 - Certificate III in Horticulture (Nursery) | 0 | 1,088 | 0 | 0 | 0 | 0 | 1,088 |
| RUH30698 - Certificate III in Horticulture (Parks and Gardens) | 0 | 1,995 | 0 | 0 | 0 | 0 | 1,995 |
| RUH30798 - Certificate III in Horticulture (Turf Management) | 0 | 1,249 | 0 | 0 | 0 | 0 | 1,249 |
| RUH30898 - Certificate III in Horticulture (Production) | 0 | 781 | 0 | 0 | 0 | 0 | 781 |
| RUH30901 - Certificate III in Rural Operations | 11 | 9 | 0 | 0 | 0 | 0 | 20 |
| RUH40198 - Certificate IV in Horticulture | 0 | 1,861 | 0 | 0 | 0 | 0 | 1,861 |
| RUH40298 - Certificate IV in Horticulture (Arboriculture) | 0 | 125 | 0 | 0 | 0 | 0 | 125 |
| RUH40498 - Certificate IV in Horticulture (Landscape) | 0 | 387 | 0 | 0 | 0 | 0 | 387 |
| RUH40598 - Certificate IV in Horticulture (Nursery) | 0 | 216 | 0 | 0 | 0 | 0 | 216 |
| RUH40698 - Certificate IV in Horticulture (Parks and Gardens) | 0 | 233 | 0 | 0 | 0 | 0 | 233 |
| RUH40798 - Certificate IV in Horticulture (Turf Management) | 0 | 63 | 0 | 0 | 0 | 0 | 63 |
| RUH40898 - Certificate IV in Horticulture (Production) | 0 | 193 | 0 | 0 | 0 | 0 | 193 |
| RUH50198 - Diploma of Horticulture | 0 | 1,545 | 0 | 0 | 0 | 0 | 1,545 |
| RUH50298 - Diploma of Horticulture (Arboriculture) | 0 | 70 | 0 | 0 | 0 | 0 | 70 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environment Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|---|-----------------------|--|-------------------------------|--------------------------------|----------------------------------|---|---------------|
| RUH50398 - Diploma of Horticulture (Floriculture) | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| RUH50498 - Diploma of Horticulture (Landscape) | 0 | 114 | 0 | 0 | 0 | 0 | 114 |
| RUH50598 - Diploma of Horticulture (Nursery) | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| RUH50698 - Diploma of Horticulture (Parks and Gardens) | 0 | 286 | 0 | 0 | 0 | 0 | 286 |
| RUH50798 - Diploma of Horticulture (Turf Management) | 0 | 84 | 0 | 0 | 0 | 0 | 84 |
| RUH50898 - Diploma of Horticulture (Production) | 0 | 181 | 0 | 0 | 0 | 0 | 181 |
| RUH60198 - Advanced Diploma of Horticulture | 0 | 32 | 0 | 0 | 0 | 0 | 32 |
| RUH60298 - Advanced Diploma of Horticulture (Arboriculture) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RUH60498 - Advanced Diploma of Horticulture (Landscape) | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| RUH60598 - Advanced Diploma of Horticulture (Nursery) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RUH60698 - Advanced Diploma of Horticulture (Parks and Gardens) | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| RUH60798 - Advanced Diploma of Horticulture (Turf Management) | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| RUH60898 - Advanced Diploma of Horticulture (Production) | 0 | 15 | 0 | 0 | 0 | 0 | 15 |
| Total RUH - Horticulture | 168 | 32,949 | 0 | 0 | 0 | 0 | 33,117 |
| SFI - Seafood Industry | 0 | 0 | 0 | 1,868 | 0 | 0 | 1,868 |
| SFI10100 - Certificate I in the Seafood Industry (Aquaculture) | 0 | 0 | 0 | 76 | 0 | 0 | 76 |
| SFI20100 - Certificate II in the Seafood Industry (Aquaculture) | 0 | 0 | 0 | 547 | 0 | 0 | 547 |
| SFI30100 - Certificate III in the Seafood Industry (Aquaculture) | 0 | 0 | 0 | 825 | 0 | 0 | 825 |
| SFI30400 - Certificate III in the Seafood Industry (Fisheries Compliance) | 0 | 0 | 0 | 121 | 0 | 0 | 121 |
| SFI40100 - Certificate IV in the Seafood Industry (Aquaculture) | 0 | 0 | 0 | 164 | 0 | 0 | 164 |
| SFI50100 - Diploma of the Seafood Industry (Aquaculture) | 0 | 0 | 0 | 92 | 0 | 0 | 92 |
| SFI50400 - Diploma of the Seafood Industry (Fisheries Compliance) | 0 | 0 | 0 | 43 | 0 | 0 | 43 |
| Total SFI - Seafood Industry | 0 | 0 | 0 | 1,868 | 0 | 0 | 1,868 |
| UTW - Water Industry | 0 | 0 | 0 | 0 | 534 | 0 | 534 |
| UTW20198 - Certificate II in Water Industry Operations | 0 | 0 | 0 | 0 | 463 | 0 | 463 |
| UTW30198 - Certificate III in Water Industry Operations | 0 | 0 | 0 | 0 | 70 | 0 | 70 |
| UTW60198 - Advanced Diploma of Water Industry Operations | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total - UTW - Water Industry | 0 | 0 | 0 | 0 | 534 | 0 | 534 |

| | 0501 - Agriculture | 0503 - Horticulture and Viticulture | 0505 - Forestry Studies | 0507 - Fisheries Studies | 0509 - Environmental Studies | 0599 - Other Agriculture, Environmental and Related Studies | TOTAL 05 |
|--|-----------------------|--|-------------------------------|--------------------------------|------------------------------------|--|---------------|
| WFS - Funeral Services | | | | | | | |
| WFS30402 - Certificate III in Funeral Services (Gravedigging, Grounds and Maintenance) | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| Total WFS - Funeral Services | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| Total National Training Package | 16,918 | 38,209 | 6,172 | 1,868 | 5,606 | 1,645 | 70,418 |
| Total National Accredited Courses | 3,405 | 405 | 73 | 171 | 3,068 | 388 | 7,510 |
| Grand Total | 20,323 | 38,614 | 6,245 | 2,039 | 8,674 | 2,033 | 77,928 |

VET-in-school delivery

Around 5% of VET-in-school students (under the MCEETYA definition) undertook courses in Agriculture, Environmental and Related Studies.

Apprentices and Trainees

Apprentice and Trainee In training as at 31 December 1999 and 2003 by selected Occupations, State/Territory Based on September 2004 estimates

| | NSW | Vic | Qld | SA | WA | Tas | NT | ACT | Australia |
|---|-------|-------|-----|-------|-----|-----|----|-----|-----------|
| In training as at 31 December 1999 | | | | | | | | | |
| Agriculture | | | | | | | | | |
| 13 Farmers and Farm Managers | 20 | 0 | 275 | 218 | 54 | 74 | 35 | 0 | 676 |
| 4611 Farm Overseers | 299 | 614 | 7 | 222 | 0 | 0 | 17 | 0 | 1,159 |
| 4612 Shearers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9921 Farm Hands | 246 | 200 | 275 | 193 | 32 | 70 | 11 | 1 | 1,028 |
| 9929 Other Agricultural and Horticultural Labourers | 0 | 0 | 1 | 0 | 76 | 81 | 0 | 5 | 163 |
| <i>Sub Total</i> | 565 | 814 | 558 | 633 | 162 | 225 | 63 | 6 | 3,026 |
| Horticulture | | | | | | | | | |
| 462 Horticultural Tradespersons | 1,347 | 1,276 | 209 | 435 | 305 | 47 | 10 | 89 | 3,718 |
| 4984 Florists | 1 | 143 | 0 | 2 | 18 | 2 | 0 | 0 | 166 |
| <i>Sub Total</i> | 1,348 | 1,419 | 209 | 437 | 323 | 49 | 10 | 89 | 3,884 |
| Total | 1,913 | 2,233 | 767 | 1,070 | 485 | 274 | 73 | 95 | 6,910 |

In training as at 31 December 2003

| | | | | | | | | | |
|---|-------|-------|-----|-----|-----|-----|----|-----|-------|
| Agriculture | | | | | | | | | |
| 13 Farmers and Farm Managers | 170 | 0 | 240 | 2 | 0 | 61 | 3 | 0 | 476 |
| 4611 Farm Overseers | 263 | 581 | 61 | 294 | 72 | 51 | 5 | 0 | 1,327 |
| 4612 Shearers | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 9921 Farm Hands | 323 | 266 | 184 | 187 | 85 | 39 | 2 | 0 | 1,085 |
| 9929 Other Agricultural and Horticultural Labourers | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 |
| <i>Sub Total</i> | 774 | 847 | 485 | 482 | 158 | 153 | 10 | 0 | 2,909 |
| Horticulture | | | | | | | | | |
| 462 Horticultural Tradespersons | 1,679 | 1,881 | 353 | 352 | 303 | 4 | 23 | 110 | 4,705 |
| 4984 Florists | 75 | 123 | 39 | 21 | 22 | 2 | 0 | 2 | 283 |
| <i>Sub Total</i> | 1,754 | 2,004 | 392 | 373 | 325 | 6 | 23 | 112 | 4,988 |
| Total | 2,528 | 2,851 | 877 | 855 | 482 | 159 | 33 | 112 | 7,897 |

Note: The apprentice and trainee data is analysed according to Australian Standard Classification of Occupations (ASCO) because that information is contained in each apprentice and trainee contract.

**Apprentice and Trainee Commencements 12 months to December 1999 to 2003 by selected Occupations,
Australia**
Based on September 2004 estimates

Commencements 12 months to December

| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---------|---------|---------|---------|---------|
| 1311 Mixed Crop and Livestock Farmers | 109 | 25 | 14 | 13 | 0 |
| 1312 Livestock Farmers | 395 | 281 | 301 | 355 | 382 |
| 1313 Crop Farmers | 32 | 23 | 11 | 11 | 87 |
| 2114 Environmental and Agricultural Science Professionals | 165 | 176 | 182 | 187 | 208 |
| 4611 Farm Overseers | 910 | 724 | 918 | 966 | 964 |
| 4612 Shearers | 0 | 0 | 0 | 0 | 19 |
| 4621 Nurserypersons | 257 | 275 | 308 | 278 | 249 |
| 7119 Other Mobile Plant Operators | 31 | 60 | 68 | 102 | 99 |
| 9221 Hand Packers | 0 | 0 | 0 | 0 | 0 |
| 9921 Farm Hands | 1,287 | 1,195 | 1,240 | 1,412 | 1,193 |
| 9922 Nursery and Garden Labourers | 1,816 | 2,067 | 2,462 | 2,592 | 2,603 |
| 9929 Other Agricultural and Horticultural Labourers | 202 | 120 | 31 | 27 | 6 |
| Total Agriculture and Horticulture (including other occupational groups*) | 5,351 | 5,092 | 5,829 | 6,240 | 6,080 |
| Total (Occupation groups) | 198,723 | 210,220 | 223,952 | 264,565 | 277,645 |

* Other occupation groups include 7995 Forestry and Logging Workers and 1314 Aquaculture Farmers

2. The skills needs of agricultural industries in Australia, including the expertise and capacity of industries to specify the skills-sets required for training, and the extent to which vocational training meets the needs of rural industries.

Following are references to research that relates to the theme of current and future industry training needs. These include both general and specific perspectives.

Research reports

Department of Education, Training and Youth Affairs (2001) *Skill needs now and in the future in the rural industry: wool production, production horticulture, viticulture, cotton production*. Produced by the Rural Industry Working Group. Commonwealth of Australia, Canberra.

This research report relates to the Rural Industry Taskforce project and analysis undertaken by NCVET for Rural Skills Australia.

This industry working group report on skills shortages in the rural industry is the result of an analysis of four major commodity sectors, namely wool, production horticulture, viticulture and cotton. The report was developed through a combination of examining recent research, data analysis of available statistics, consultations with industry and training providers, and analysis of questionnaires sent to industry practitioners.

The report identifies a range of views and perceptions concerning skill related issues and covers topics such as: the benefits of investment in training, current and future skill needs, barriers to satisfying skill needs, and initiatives and solutions.

This report can be found at the following URL:

http://www.skillsinitiative.gov.au/documents/working_group/rural?report.pdf

(accessed and available on 13 May 2005)

Kilpatrick S and Allen K (2001) *Factors influencing demand for vocational education and training: review of research*. NCVET, Adelaide, South Australia.

This review of research covers Australian, and some international research, relating to factors that influence demand for vocational education and training (VET) by individuals, enterprises, industries, communities and regions. It examines the scope of research and reveals the gaps which need to be addressed by future VET policy and research.

There is a chapter focusing on the demand by industries and covers industry's investment in VET, as well as the implications of national VET policy's investment in an industry focus.

In addition, there is a chapter on the demand by communities, regions and the nation, which outlines the importance of education and training to the nation as a whole. General perceptions of learning, which may influence demand for VET, are discussed as well as the conditions necessary for high levels of skills formation. The economic and social benefits of an educated and trained population to the nation are also considered. The ability of existing VET programs and institutions to meet demand in regional Australia is reviewed and the recommendations made by researchers to improve opportunities for all communities under the national goals for VET are summarised. To conclude the chapter, the influence of policy on the integrity of the national system of VET is discussed.

This report is available on the NCVET website at:

<http://www.ncvet.edu.au/publications/610.html>

Loble L and Williams P (2004) 'Stimulating the demand for skills within skillecosystems', in *Research Readings* edited by S Dawe. NCVET, Adelaide, South Australia.

This book of research readings was commissioned to enable a better understanding of the past, present, and future role of the Australian vocational education and training (VET) sector in business innovation.

The chapter referenced relates to skills within skillecosystems and the national project being led by the New South Wales Department of Education and Training to reposition skills policy within the broad matrix of economic and labour market policy.

The chapter discusses the changing environment and articulates what a skillecosystem is, and how using the skillecosystem framework to analyse regions or industries, reveals how the unique configuration of firms, institutions, markets and regulations affects the demand for and use of skills, and enables policy-makers to reconcile these demand-side drivers with traditional supply-side considerations. The Australian wine industry is given

as an example of a skillecosystem. The role of VET providers as innovation agents is also indicated.

More information about the national project can be found at:

<http://www.skillecosystem.net>

This report is available on the NCVET website at:

<http://www.ncver.edu.au/research/proj/nd3113.pdf>