**NZQA**

**Approved**

Achievement standard: 91052 Version 3

Standard title: Demonstrate understanding of the ways a technological outcome, people, and social and physical environments interact

Level: 1

Credits: 4

Resource title: Grafted grapevine

Resource reference: Generic Technology VP-1.9 v2

Vocational pathway: Primary Industries

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| Quality assurance status | These materials have been quality assured by NZQA.  NZQA Approved number A-A-02-2015-91052-02-7366 |
| Authenticity of evidence | Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material.  Using this assessment resource without modification may mean that learners’ work is not authentic. Assessors/ educators may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

Vocational Pathway Assessment Resource

Achievement standard: 91052

Standard title: Demonstrate understanding of the ways a technological outcome, people, and social and physical environments interact

Level: 1

Credits: 4

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Vocational pathway: Primary Industries

Learner instructions

# Introduction

This assessment activity requires you to demonstrate understanding of the ways a technological outcome (grafted grapevine), people, and social and physical environments interact.

You are going to be assessed on how comprehensive your understanding is of the ways the technological outcome (grafted grapevine), people, and social and physical environments interact.

The following instructions provide you with a way to structure your work so you can demonstrate what you have learnt and achieve success in this standard.

Assessor/educator note: It is expected that the assessor/educator will read the learner instructions and modify them if necessary to suit their learners.

# Task

The history of New Zealand wines began with the purchase of suitable healthy rootstocks that best matched successful grape varieties and wine styles to regions. Write an article or a blog that describes the impact the introduction of the grafted grapevine had on New Zealand’s society and culture.

## Gather information

Gather, select, and record relevant information for your article by considering the following:

* how the introduction of the grafted grapevine addressed the need and/or opportunity that arose from widespread pest infestations, for example how did replanting with new grafted stock increase fruit production, minimise the effects of virus damage, and improve wine quality
* the key people who were involved in producing and popularising the grafted grapevine
* the main ways the grafted grapevine impacted on or influenced the physical and social environments at the time, for example how does the introduction of grafted rootstock influence the development of new wines?

Focus on gathering information that will enable you to complete your article or blog such as quotes, photographs, videos and other illustrations.

## Present your article or blog

In your article or blog:

* describe the environment at the time the grafted grapevine was introduced, and the need and/or opportunity that the grafted grapevine addressed
* identify who the key people were that played a role in the introduction of the grafted grapevine
* explain how the grafted grapevine and the social and physical environments interact
* discuss the impact that these interactions had on society, for example in relation to wine production, costs, the introduction of improved root stocks, and importing of varieties and clones
* discuss both the successful and unsuccessful ways in which people, the social and physical environments and the grafted grapevine introduction interact.

# Resources

Useful websites:

Riversun Nursery <http://riversun.co.nz/grafted-grapevines>

New Zealand’s Winegrowers <http://www.nzwine.com>

Useful books:

*Phylloxera: How Wine was saved for the World*, Harper Collins, C. Campbell, 2004

*Viticulture Vol 1 Practices*, Wine Publishers Pty Ltd, B.G. Coombe and P.R. Dry, 2001

*Viticulture Vol 2 Practices*, Wine Publishers Pty Ltd, B.G. Coombe and P.R. Dry, 2001

*The Wines and Vineyards of New Zealand*, Hodder Moa Beckett, M. Cooper, 1996

*Pioneers of New Zealand Wine*, Reed Books/Southern Cross Books, D. Scott, 2002.

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Assessor/Educator guidelines

# Introduction

The following guidelines are supplied to enable assessors/educators to carry out valid and consistent assessment using this internal assessment resource.

As with all assessment resources, education providers will need to follow their own quality control processes. Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material. Using this assessment resource without modification may mean that learners' work is not authentic. The assessor/educator may need to change figures, measurements or data sources or set a different context or topic. Assessors/educators need to consider the local context in which learning is taking place and its relevance for learners.

Assessors/educators need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing learners against it.

# Context/setting

This activity requires learners to demonstrate comprehensive understanding of the ways a technological outcome (grafted grapevine), people, and social and physical environments interact.

# Conditions

This is an individual activity. This activity is based on learners presenting an article or blog. Presentation is not restricted to this form. It could also be a computer presentation, an oral report or any other suitable format. You may wish to take learner preferences into account in deciding on the format.

# Resource requirements

Assessor/educator will need to provide background information about New Zealand’s wine culture and its emergence in society.

Learners require access to the internet for research.

# Additional information

Visits to grape-growing establishments, or visits from viticulturists may be helpful.

## Other possible contexts for this vocational pathway

Other possible contexts include manufacturing of any products in these primary industries: seafood, dairy, honey and bee products, plant products, poultry and eggs, pet food, meat.

# Assessment schedule: Generic Technology 91052 – Grafted grapevine

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner demonstrates understanding of the ways introducing the grafted grapevine to New Zealand, people, and social and physical environments interact by:   * describing the social and historical context within which the grafted grapevine is located   For example:  The learner describes how New Zealand grapevines were previously all from European stock which became infected with phylloxera, a widespread pest affecting fruit production, how poor fruit affected wine results and capital reinvestment, and the consequent decisions that prompted growers to look for alternatives.   * identifying the people, and social and physical environments that are connected to the grafted grapevine introduction   For example:  The learner identifies the early viticulturists and nurserymen as key people, and how they developed the grafted grapevine.   * describing the successful and unsuccessful ways in which the grafted grapevine introduction, the people, and the social and physical environments interact   For example:  The learner describes how grape growers had to balance the cost of replanting with grafted rootstock with the desire for increased fruit production and the development of new wines.  *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner demonstrates in-depth understanding of the ways introducing the grafted grapevine to New Zealand, people, and social and physical environments interact by:   * describing the social and historical context within which the grafted grapevine is located   For example:  The learner describes how New Zealand grapevines were previously all from European stock which became infected with phylloxera, a widespread pest affecting fruit production, how poor fruit affected wine results and capital reinvestment, and the consequent decisions that prompted growers to look for alternatives.   * explaining how people, and the social and physical environments are connected to the grafted grapevine introduction   For example:  The learner explains how early viticulturists and nurserymen developed grafted grapevines.   * explaining the successful and unsuccessful ways in which the grafted grapevine introduction, the people, and the social and physical environments interact   For example, the learner explains:   * + how the success of some early grafted grape varieties produced superior quality wines, influencing the growing wine industry of New Zealand, and the positive impact on particular regions. Although forced to replant due to the spread of phylloxera throughout New Zealand, grape growers continued to investigate which rootstocks best suited their sites, and best matched the grape variety and wine styles they wanted to produce   + how the New Zealand Winegrowers Board developed grafted grapevine (GGV) standards to minimise the impact of diseased vines on the industry, such as standard measurements and tests that buyers can rely on. Consequently better internationally recognised wines are being produced from rootstocks that have certified origins, and are bred from selected vines that show the best characteristics for the wines being produced.   *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner demonstrates comprehensive understanding of the ways introducing the grafted grapevine to New Zealand, people, and social and physical environments interact by:   * describing the social and historical context within which the grafted grapevine is located   For example:  The learner describes how New Zealand grapevines were previously all from European stock which became infected with phylloxera, a widespread pest affecting fruit production, how poor fruit affected wine results and capital reinvestment, and the consequent decisions that prompted growers to look for alternatives.   * explaining how people, and the social and physical environments are connected to the grafted grapevine introduction   For example:  The learner explains how early viticulturists and nurserymen developed grafted grapevines*.*   * discussing why the grafted grapevine introduction, people, and social and physical environments interact in successful and unsuccessful ways   For example, the learner discusses:   * + new challenges for viticulturists, such as determining the best rootstock to use in varying soils to increase production results, has led to successful new wines being developed   + growing popularity of New Zealand wines has fuelled the demand for disease-free vines that can produce the required fruit   + significant advances in science and technology have resulted in disease-free grafted grapevines   + producing better vines is an expensive long-term strategy driven by consumer demand for wine, thus using healthy vines is a sound investment   + increased wine production has driven the need for better business, management and supply chain requirements, marketing and research, labour and production facilities   + the elimination of some rootstocks because they are unsuitable; some commercial grafting techniques have not worked well; and at times producers may not reach professional nursery standards.   *The above expected learner responses are indicative only and relate to just part of what is required.* |

Final grades will be decided using professional judgement based on an examination of the evidence provided against the criteria in the Achievement Standard. Judgements should be holistic, rather than based on a checklist approach.