

## Assessment Schedule – 2022

### Agricultural and Horticultural Science: Analyse a New Zealand primary production environmental issue (91532)

#### Assessment Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<p><i>Analysing</i> involves:</p> <ul style="list-style-type: none"> <li>explaining the environmental issue arising from the primary production management practices</li> <li>explaining potential courses of action to mitigate the negative impacts of the management practices</li> <li>recommending course(s) of action to support sustainable management practices.</li> </ul>	<p><i>Critically analysing</i> involves:</p> <ul style="list-style-type: none"> <li>explaining, in detail, the environmental issue arising from primary production management practices</li> <li>evaluating potential courses of action to mitigate the negative impacts of the production management practices. This may include comparing and contrasting alternative courses of action</li> <li>recommending course(s) of action to support sustainable production management practices that best address the issue.</li> </ul>	<p><i>Comprehensively analysing</i> involves:</p> <ul style="list-style-type: none"> <li>justifying course(s) of action to support sustainable production management practice(s) that best address the issue; this includes environmental, economic, political, and / or social considerations.</li> </ul>

#### Evidence

##### Question One:

Part	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
A	<p><b>Environmental impacts</b></p> <p><i>Effects on freshwater (example):</i></p> <ul style="list-style-type: none"> <li>increased nutrient levels in groundwater</li> <li>reduced flow levels in surface water reducing their life-supporting capacity</li> <li>destruction of marine habitat from changing natural watercourses</li> <li>increased nuisance weed growth in waterways contributing to fluctuating DO levels.</li> <li>increased levels of pathogens in waterways.</li> </ul>	<p><b>Explains</b> the negative impact on freshwater from producing their primary product</p>	<p><b>Explains in detail</b> the negative impact on freshwater from producing their primary product with supporting data and relevant evidence.</p>	

<p>B</p>	<p><b>Economic impacts</b> (<i>example</i>):</p> <ul style="list-style-type: none"> <li>• increased farm profitability</li> <li>• increased spending in local communities and towns supporting local businesses</li> <li>• increased exports to overseas markets, contributing to New Zealand’s GDP.</li> </ul>	<p><b>Explains</b> the positive economic impacts from producing a chosen primary product (from Part A).</p> <p><b>Includes</b> a range of groups who are affected.</p>	<p><b>Explains in detail</b> the positive economic impacts from producing a chosen primary product (from Part A).</p> <p><b>Includes</b> a range of groups who are affected.</p> <p>Uses examples and relevant data to support answer.</p>	
<p>C</p>	<p><b>Course of action to gain sustainable production</b> (<i>example</i>):</p> <ul style="list-style-type: none"> <li>• nutrient loss (nitrate leaching) kept below a certain level due to less, or managed, fertiliser input</li> <li>• animals, such as cows, are kept off pasture certain times of the year to reduce loss of nitrates from urine</li> <li>• animals excluded from all waterways at all times, with substantial setback</li> <li>• on-farm water storage utilised to reduce water takes from surface water or ground water</li> <li>• production system chosen to match the natural features, such as rainfall, sunshine, soil type etc.</li> </ul>	<p><b>Recommends</b> a course of action that producers can carry out to further reduce their negative impact on freshwater in New Zealand.</p> <p><b>Justifies</b> choice by comparing it with another course of action.</p> <p>Uses some data to support answer.</p>	<p><b>Recommends</b> a course of action that producers can carry out to further reduce their negative impact on freshwater in New Zealand.</p> <p><b>Justifies</b> choice by comparing it with another course of action.</p> <p>Uses relevant data and evidence to support answer.</p>	<p><b>Recommends</b> a course of action that producers can carry out to further reduce their negative impact on freshwater in New Zealand.</p> <p><b>Justifies</b> choice by comparing it with another course of action.</p> <p>Uses relevant examples and data, and includes the positive environmental, social, and economic impacts of the chosen action.</p>

N1	N2	A3	A4	M5	M6	E7	E8
<p><b>Partially explains</b> the negative impact on freshwater from producing their chosen primary product.</p>	<p><b>Partially explains</b> the negative impact on freshwater AND the positive economic impacts from producing their chosen primary product.</p>	<p><b>Explains</b> the negative impact on freshwater AND partially explains the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Explains</b> a realistic course of action the grower could take to allow for sustainable production. (Mainly the reduction of negative environmental impacts.)</p>	<p><b>Explains</b> the negative impact on freshwater AND explains the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Explains</b> a realistic course of action the grower could take to allow for sustainable production. (Mainly the reduction of negative environmental impacts.)</p>	<p><b>Explains in detail</b> the negative impact on freshwater AND explains the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Explains in detail</b> a realistic course of action the grower could take to allow for sustainable production. (The reduction of negative environmental impacts, with some coverage of social or economic impacts.)</p>	<p><b>Explains in detail</b> the negative impact on freshwater AND the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Explains in detail</b> a realistic course of action the grower could take to allow for sustainable production. (The reduction of negative environmental impacts, with some coverage of social or economic impacts.)</p>	<p><b>Explains in detail</b> the negative impact on freshwater AND the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Justifies</b> a realistic course of action the grower could take to allow for sustainable production. (Detail on the reduction of negative environmental impacts as well as discussion on social and / or economic impacts.)</p>	<p><b>Explains in detail</b> the negative impact on freshwater AND the positive economic impacts from producing their chosen primary product.</p> <p><i>AND</i></p> <p><b>Comprehensively justifies</b> a realistic course of action the grower could take to allow for sustainable production. (Detail on the reduction of negative environmental impacts as well as discussion on social and economic impacts.)</p>

**N0** = No response; no relevant evidence.

### Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0 – 2	3 – 4	5 – 6	7 – 8