2012 HSC Agriculture
Marking Guidelines

Section I, Part A

Multiple-choice Answer Key

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>D</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
</tr>
<tr>
<td>12</td>
<td>A</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
</tr>
<tr>
<td>14</td>
<td>B</td>
</tr>
<tr>
<td>15</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>D</td>
</tr>
<tr>
<td>17</td>
<td>C</td>
</tr>
<tr>
<td>18</td>
<td>B</td>
</tr>
<tr>
<td>19</td>
<td>D</td>
</tr>
<tr>
<td>20</td>
<td>B</td>
</tr>
</tbody>
</table>
Section I, Part B

Question 21

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies similarities and differences in the use of introduced and native pasture species and links these to animal production</td>
<td>5</td>
</tr>
<tr>
<td>Identifies similarities and differences in the use of introduced and native pasture species</td>
<td>4</td>
</tr>
<tr>
<td>Identifies uses of a native or introduced pasture species and links them to animal production</td>
<td>3</td>
</tr>
<tr>
<td>Identifies a feature of native and a feature of an introduced pasture species OR Identifies TWO or more features of either a native or an introduced pasture species</td>
<td>2</td>
</tr>
<tr>
<td>Identifies a feature of either a native or introduced pasture species</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 22 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both correct</td>
<td>2</td>
</tr>
<tr>
<td>One correct</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 22 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outlines a design of a relevant trial which includes replication, randomisation, a control and standardised conditions</td>
<td>4</td>
</tr>
<tr>
<td>Outlines a trial with TWO or THREE relevant design components (randomisation, replication, control or standard conditions)</td>
<td>2–3</td>
</tr>
<tr>
<td>Outlines a trial with only ONE relevant design component (randomisation, replication, control or standard conditions)</td>
<td>1</td>
</tr>
</tbody>
</table>
Question 23 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies at least TWO water sources</td>
<td>2</td>
</tr>
<tr>
<td>Identifies only ONE water source</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 23 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies TWO strategies and explains how both of them maintain water</td>
<td>4</td>
</tr>
<tr>
<td>quality</td>
<td></td>
</tr>
<tr>
<td>Identifies TWO strategies that can be used to maintain water quality</td>
<td>3</td>
</tr>
<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>Explains how ONE of them maintains water quality</td>
<td>2</td>
</tr>
<tr>
<td>Identifies TWO strategies that can be used to maintain water quality</td>
<td>1</td>
</tr>
<tr>
<td>Identifies a strategy that can be used to maintain water quality</td>
<td></td>
</tr>
</tbody>
</table>

Question 24 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies the relationship between carcase weight and fat percentage</td>
<td>2</td>
</tr>
<tr>
<td>relates these to producing carcases for different markets</td>
<td></td>
</tr>
<tr>
<td>Identifies the relationship between carcase weight and fat percentage</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 24 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensively explains how at least TWO management techniques can</td>
<td>6</td>
</tr>
<tr>
<td>be used to modify carcase composition</td>
<td></td>
</tr>
<tr>
<td>Identifies and explains how TWO management techniques can be used to</td>
<td>4–5</td>
</tr>
<tr>
<td>modify carcase composition</td>
<td></td>
</tr>
<tr>
<td>Identifies TWO management techniques and explains how ONE of them can</td>
<td>2–3</td>
</tr>
<tr>
<td>be used to modify carcase composition OR</td>
<td></td>
</tr>
<tr>
<td>Identifies TWO management techniques</td>
<td>1</td>
</tr>
<tr>
<td>Identifies ONE management technique that can be used to modify carcase</td>
<td></td>
</tr>
<tr>
<td>composition</td>
<td></td>
</tr>
</tbody>
</table>
### Question 25 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies a characteristic and relates how changing it can improve crop production</td>
<td>2</td>
</tr>
<tr>
<td>Identifies one characteristic</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question 25 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides detailed characteristics and features of TWO plant breeding systems</td>
<td>4</td>
</tr>
<tr>
<td>Provides some characteristics and features of TWO plant breeding systems OR</td>
<td>2–3</td>
</tr>
<tr>
<td>Provides detailed characteristics and features of ONE plant breeding system</td>
<td></td>
</tr>
<tr>
<td>Identifies at least ONE plant breeding system</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question 26 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes clear links between management techniques and their contribution to sustainable soil management</td>
<td>4</td>
</tr>
<tr>
<td>Sketches in general terms at least TWO soil management techniques OR</td>
<td>2–3</td>
</tr>
<tr>
<td>Shows some links between at least TWO soil management techniques and sustainability</td>
<td></td>
</tr>
<tr>
<td>Identifies at least ONE relevant management technique</td>
<td>1</td>
</tr>
</tbody>
</table>
**Question 26 (b)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identifies similarities and/or differences between management practices from mid 1900s and present day</td>
<td>6</td>
</tr>
<tr>
<td>• Clearly links these practices to impacts on soil fertility</td>
<td></td>
</tr>
<tr>
<td>• Identifies similarities and/or differences between management practices from mid 1900s and present day</td>
<td>4–5</td>
</tr>
<tr>
<td>• Attempts some linking of these practices to soil fertility</td>
<td></td>
</tr>
<tr>
<td>• Sketches in general terms management practices from mid 1900s and/or present day</td>
<td>2–3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>• Identifies two management practices</td>
<td></td>
</tr>
<tr>
<td>• Identifies a management technique from either mid 1900s or present</td>
<td>1</td>
</tr>
</tbody>
</table>

**Question 27 (a)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identifies a possible method of selling the product AND indicates the main features of this method</td>
<td>2</td>
</tr>
<tr>
<td>• Identifies a possible method of selling the product</td>
<td>1</td>
</tr>
</tbody>
</table>

**Question 27 (b)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identifies a government decision and relates the impact of it to farm production or marketing</td>
<td>2</td>
</tr>
<tr>
<td>• Identifies a government decision that may impact on farm production or marketing</td>
<td>1</td>
</tr>
</tbody>
</table>
### Question 27 (c)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides clear and detailed judgements relating to the value of relevant management strategies</td>
<td>6</td>
</tr>
<tr>
<td>• Provides some judgements relating to the value of relevant management strategies</td>
<td>4–5</td>
</tr>
<tr>
<td>• Outlines strategies that can improve product quality</td>
<td>2–3</td>
</tr>
<tr>
<td>• Identifies at least ONE strategy that can improve product quality</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question 28 (a)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clearly explains at least ONE effect of rising input costs and links it to a range of decisions made on the farm</td>
<td>4</td>
</tr>
<tr>
<td>• Outlines an effect of rising input costs and links it to a decision made on a farm</td>
<td>3</td>
</tr>
<tr>
<td>• Outlines an effect of rising input costs</td>
<td>2</td>
</tr>
<tr>
<td>• Identifies an effect of rising input costs</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question 28 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides detailed points for and/or against the use of gross margins in farm management</td>
<td>5</td>
</tr>
<tr>
<td>• Provides some points for and/or against the use of gross margins in farm management</td>
<td>3–4</td>
</tr>
<tr>
<td>• Sketches in general terms the use of gross margins in farm management</td>
<td>1–2</td>
</tr>
<tr>
<td>• Defines the term ‘gross margin’</td>
<td></td>
</tr>
</tbody>
</table>
Section II

Question 29 (a) (i)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Names a research study and clearly identifies a reason for conducting the research</td>
<td>2</td>
</tr>
<tr>
<td>• Names a research study OR Identifies the research problem</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 29 (a) (ii)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides a detailed outline of the research findings AND Clearly explain how the findings can be used</td>
<td>6</td>
</tr>
<tr>
<td>• Provides a general outline of the research findings AND Explains how the findings can be used</td>
<td>4–5</td>
</tr>
<tr>
<td>• Provides a limited outline of the research findings AND/OR Gives a limited explanation of how the findings can be used</td>
<td>2–3</td>
</tr>
<tr>
<td>• Provides a feature of the research findings OR Proposes a use of the research</td>
<td>1</td>
</tr>
</tbody>
</table>
**Question 29 (b)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrates extensive knowledge and deep understanding of the production of specific genetically modified crops</td>
<td>10–12</td>
</tr>
<tr>
<td>• Addresses ethical/legal/social/economic implications of growing genetically modified crops</td>
<td></td>
</tr>
<tr>
<td>• Response is logical and cohesive throughout</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates knowledge and understanding of the production of specific genetically modified crops</td>
<td>7–9</td>
</tr>
<tr>
<td>• Gives some details of the ethical/legal/social/economic impacts of growing genetically modified crops</td>
<td></td>
</tr>
<tr>
<td>• Response is mainly logical and cohesive</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates limited knowledge and understanding of the production of specific genetically modified crops</td>
<td>4–6</td>
</tr>
<tr>
<td>• Identifies some of the ethical/legal/social/economic impacts of growing genetically modified crops</td>
<td></td>
</tr>
<tr>
<td>• Response is organised</td>
<td></td>
</tr>
<tr>
<td>• Identifies some genetically modified crops and/or features of them</td>
<td>1–3</td>
</tr>
<tr>
<td>• Response is disorganised</td>
<td></td>
</tr>
</tbody>
</table>

**Question 30 (a) (i)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Names a research study and clearly identifies a reason for conducting the research</td>
<td>2</td>
</tr>
<tr>
<td>• Names a research study</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>• Identifies the research problem</td>
<td>1</td>
</tr>
<tr>
<td>• Identifies the research problem</td>
<td></td>
</tr>
</tbody>
</table>
### Question 30 (a) (ii)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides a detailed outline of the research findings AND</td>
<td>6</td>
</tr>
<tr>
<td>• Clearly explains how the findings can be used</td>
<td></td>
</tr>
<tr>
<td>• Provides a general outline of the research findings AND</td>
<td>4–5</td>
</tr>
<tr>
<td>• Explains how the findings can be used</td>
<td></td>
</tr>
<tr>
<td>• Provides a limited outline of the research findings AND/OR</td>
<td>2–3</td>
</tr>
<tr>
<td>• Gives a limited explanation of how the findings can be used</td>
<td></td>
</tr>
<tr>
<td>• Provides a feature of the research findings OR</td>
<td>1</td>
</tr>
<tr>
<td>• Proposes a use of the research</td>
<td></td>
</tr>
</tbody>
</table>

### Question 30 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrates extensive knowledge and deep understanding of specific management strategies that maintain production</td>
<td>10–12</td>
</tr>
<tr>
<td>• Provides clear links between each management strategy and maintenance of production</td>
<td></td>
</tr>
<tr>
<td>• Response is logical and cohesive throughout</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates knowledge and understanding of specific management strategies that maintain production</td>
<td>7–9</td>
</tr>
<tr>
<td>• Makes some links between strategies and maintenance of production</td>
<td></td>
</tr>
<tr>
<td>• Response is mainly logical and cohesive</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates limited knowledge and understanding of management strategies that maintain production</td>
<td>4–6</td>
</tr>
<tr>
<td>• Describes management strategies available to farms</td>
<td></td>
</tr>
<tr>
<td>• Response is organised</td>
<td></td>
</tr>
<tr>
<td>• Identifies management strategies available to farms</td>
<td>1–3</td>
</tr>
<tr>
<td>• Response is disorganised</td>
<td></td>
</tr>
</tbody>
</table>
### Question 31 (a) (i)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names a research study and clearly identifies a reason for conducting the research</td>
<td>2</td>
</tr>
<tr>
<td>Names a research study OR Identifies the research problem</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question 31 (a) (ii)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a detailed outline of the research findings AND Clearly explains how the findings can be used</td>
<td>6</td>
</tr>
<tr>
<td>Provides a general outline of the research findings AND Explains how the findings can be used</td>
<td>4–5</td>
</tr>
<tr>
<td>Provides a limited outline of the research findings AND/OR Gives a limited explanation of how the findings can be used</td>
<td>2–3</td>
</tr>
<tr>
<td>Provides a feature of the research findings OR Proposes a use of the research</td>
<td>1</td>
</tr>
</tbody>
</table>
# Question 31 (b)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrates extensive knowledge and deep understanding of the impact of specific recently introduced technologies</td>
<td>10–12</td>
</tr>
<tr>
<td>• Addresses in detail the management changes that have resulted from these technologies</td>
<td></td>
</tr>
<tr>
<td>• Response is logical and cohesive throughout</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates knowledge and understanding of the impact of specific recently introduced technologies</td>
<td></td>
</tr>
<tr>
<td>• Gives some details of the management changes that have resulted from these technologies</td>
<td>7–9</td>
</tr>
<tr>
<td>• Response is mainly logical and cohesive</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates limited knowledge and understanding of the impact of recently introduced technologies</td>
<td></td>
</tr>
<tr>
<td>• Outlines some management changes that have resulted from these technologies</td>
<td>4–6</td>
</tr>
<tr>
<td>• Response is organised</td>
<td></td>
</tr>
<tr>
<td>• Identifies a recently introduced technology OR management change</td>
<td>1–3</td>
</tr>
<tr>
<td>• Response is disorganised</td>
<td></td>
</tr>
</tbody>
</table>
## Agriculture
### 2012 HSC Examination Mapping Grid

**Section I**  
**Part A**

<table>
<thead>
<tr>
<th>Question</th>
<th>Marks</th>
<th>Content</th>
<th>Syllabus outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Role of advertising and promotion</td>
<td>H3.3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Describes factors of supply and demand</td>
<td>H3.1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>Outline plant breeding systems and breeding systems in animal production</td>
<td>H2.1</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>Definition of oestrous cycle</td>
<td>H2.2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>Integrated pest management</td>
<td>H2.2</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>Reproductive techniques</td>
<td>H2.2</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>Role of hormones</td>
<td>H2.2</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>The place of the farm</td>
<td>H3.1</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>Outline effects of plant hormones</td>
<td>H2.1</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>Evaluate ways … value add</td>
<td>H3.3</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>Outline role of objective measure</td>
<td>H2.2</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>Chemical and physical characteristics of soil</td>
<td>H2.1</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>Perform first-hand investigation</td>
<td>H2.1</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>Beneficial relationship between microbes and animals</td>
<td>H2.2</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>Analyse/interpret data</td>
<td>H4.1</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>Define integrated pest management</td>
<td>H1.1</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>Use techniques to analyse</td>
<td>H3.1</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>Interpret pesticide label</td>
<td>H2.1</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>Nitrogen cycle</td>
<td>H2.1</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>Construct diagram … energy</td>
<td>H2.2</td>
</tr>
</tbody>
</table>
### Section I
#### Part B

<table>
<thead>
<tr>
<th>Question</th>
<th>Marks</th>
<th>Content</th>
<th>Syllabus outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>5</td>
<td>Identify native and introduced pasture species</td>
<td>H2.1, H2.2</td>
</tr>
<tr>
<td>22 (a)</td>
<td>2</td>
<td>Present data</td>
<td>H4.1</td>
</tr>
<tr>
<td>22 (b)</td>
<td>4</td>
<td>First-hand investigation</td>
<td>H4.1</td>
</tr>
<tr>
<td>23 (a)</td>
<td>2</td>
<td>Water sources</td>
<td>H1.1</td>
</tr>
<tr>
<td>23 (b)</td>
<td>4</td>
<td>Maintain water quality</td>
<td>H3.4</td>
</tr>
<tr>
<td>24 (a)</td>
<td>2</td>
<td>Compare bone, muscle and fat</td>
<td>H2.2</td>
</tr>
<tr>
<td>24 (b)</td>
<td>6</td>
<td>Evaluate management techniques</td>
<td>H3.4, H5.1</td>
</tr>
<tr>
<td>25 (a)</td>
<td>2</td>
<td>Plant breeding systems</td>
<td>H3.4</td>
</tr>
<tr>
<td>25 (b)</td>
<td>4</td>
<td>Plant breeding systems</td>
<td>H3.3, H2.1</td>
</tr>
<tr>
<td>26 (a)</td>
<td>4</td>
<td>Sustainable techniques</td>
<td>H2.1</td>
</tr>
<tr>
<td>26 (b)</td>
<td>6</td>
<td>Sustainable techniques and historical data</td>
<td>H2.1</td>
</tr>
<tr>
<td>27 (a)</td>
<td>2</td>
<td>Marketing chain</td>
<td>H3.2</td>
</tr>
<tr>
<td>27 (b)</td>
<td>2</td>
<td>Outline government influence</td>
<td>H3.2</td>
</tr>
<tr>
<td>27 (c)</td>
<td>6</td>
<td>Quality and quantity criteria</td>
<td>H3.1</td>
</tr>
<tr>
<td>28 (a)</td>
<td>4</td>
<td>Outline the financial pressures</td>
<td>H3.1</td>
</tr>
<tr>
<td>28 (b)</td>
<td>5</td>
<td>Use techniques to analyse</td>
<td>H3.1</td>
</tr>
</tbody>
</table>

### Section II

<table>
<thead>
<tr>
<th>Question</th>
<th>Marks</th>
<th>Content</th>
<th>Syllabus outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 (a) (i)</td>
<td>2</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>29 (a) (ii)</td>
<td>6</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>29 (b)</td>
<td>12</td>
<td>A wide range of potential applications</td>
<td>H3.4, H5.1</td>
</tr>
<tr>
<td>30 (a) (i)</td>
<td>2</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>30 (a) (ii)</td>
<td>6</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>30 (b)</td>
<td>12</td>
<td>Management techniques available to farmers</td>
<td>H3.4, H5.1</td>
</tr>
<tr>
<td>31 (a) (i)</td>
<td>2</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>31 (a) (ii)</td>
<td>6</td>
<td>Analyse a research study</td>
<td>H4.1</td>
</tr>
<tr>
<td>31 (b)</td>
<td>12</td>
<td>Evaluate a range of new technology developments</td>
<td>H3.4, H5.1</td>
</tr>
</tbody>
</table>