HSC Agriculture

The Royal Easter Show 2025

Farm Product Study Curriculum Linked Activities

In this booklet you will find activities that will link to the units-

- *Farm Product Study*
- *A suggested follow up task to do at home.*
- *Mock examination questions to complete, based on the activity you complete.*

These activities are aligned with the Stage 6 Agriculture Syllabus and are designed to **supplement** the work you've completed in the classroom.

During your visit to the Sydney Royal Easter Show (SRES), gather as much information as possible, and follow up with additional research at home as needed.

By completing these activities and the suggested follow-up task, you'll gain specific, real-world examples to enhance your understanding and application of key concepts in the HSC examination.

9.2 Farm Product Study HSC Outcomes (linked to the activities in the booklet)

H2.2 describes the inputs, processes and interactions of animal production systems

H3.1 assesses the general business principles and decision-making processes involved in sustainable farm management and marketing of farm products

H5.1 evaluates the impact of innovation, ethics and current issues on agricultural systems

9.2 Farm Product Study – An Animal Product

Syllabus Outcomes: *This activity covers key aspects of the syllabus dot points. However, further details may need to be completed in class or as homework to fully meet all syllabus requirements.*

Students learn about	**Students learn to**
Factors of quality and quantity that influence decision making	Assess farm production systems based on measurements of quality and quantity
Quantity and quality criteria for a product	Assess the quantity and quality of the product
The marketing chain for a product	Determine the marketing chain for the product Explain various marketing options for the product
The importance of product specification in the marketing of a product	Analyse market specifications for the product
Problems that may occur in meeting market specifications of a product and the methods used to meet requirements	Evaluate management strategies used to assess and meet market specifications
The nature and potential for value adding to a product	Evaluate ways in which the product can be value added
The role of advertising and promotion in the marketing of a product	Outline strategies for the advertising and promotion of the product
The impact of scientific research and associated technology has on agricultural production and marketing	Describe recent technologies and their impact on agricultural production and / or marketing
Processing raw agricultural commodities	Construct a flow chart of steps involved in processing the raw agricultural commodity into its various forms

At the Sydney Royal Easter Show (SRES), you will find a wide range of agricultural animals and commodities, as well as a variety of end products—many of which include significant **value-adding**. By exploring the pavilions and speaking with farmers, presenters, and salespeople, you can gain deeper insight into:

- **On-Farm and Off-Farm Processes**: Learn about the systems involved in production, from farm to final product.
- **Marketing Specifications and Chains**: Explore how products meet specific market requirements and the methods used to bring them to market.
- **Promotion and Advertising**: Examine how products are promoted and advertised to attract consumers.

Make sure to ask questions and engage with the exhibitors to gather detailed, real-world examples that can be applied to your HSC studies.

Useful Information

A basic production and marketing chain includes both on-farm and off-farm processes**.**

On-farm production focuses on generating the raw product, which involves selecting stock, breeding, and managing the animals' nutrition and health to meet market specifications. Farmers determine when the animals are ready for sale, find suitable buyers, and arrange transport for processing, unless the farm is vertically integrated and processing occurs on-site.

Off-farm production involves transforming the raw product, starting with purchasing animals and transporting them to processing facilities. This stage includes processing the animals, engaging in further value-adding activities, and selling the final product either directly through retail outlets or to businesses for further distribution.

On farm production

It is suggested that you choose from this list below as your product…

Dairy Production - milk or cheese (see Riverina Fresh Working Dairy)

Cattle (Beef) production – beef (See RAS Show Pies at the Ag Discovery Pavilion – producing final product)

Sheep Production – lamb (MLA in Ag Discovery Pavillion) and wool (Spinning in Sheep Pavilion)

Aquaculture – Oysters (in Woolworth Dome)

Bees – Honey (Bee-Zebo in Arts and Crafts Pavilion)

Identify your chosen product _____

For your chosen product, head to the location where the live animal is exhibited (refer to the included map need to add map of show).

To answer some of the questions, you may need to speak with a person responsible for the animal, observe a judging class, collect and read brochures, or look for informational signs in the area.

1) Identify TWO (2) different breeds of animal that can be used to produce your product. (if possible)

2) Complete the table below

Breed	General physical characteristics	ID **ONE** (1) **specific** characteristic of this breed that is used to determine it suitability to produce the final product	What is the animal fed ? *(if you can observe what is in its stall or ask the handler)*	Describe TWO (2) Market specifications that the **LIVE** animal or raw product direct from animal needs to meet before sale	Describe a management strategy that the farmer uses to ensure that the animal meets the market specification	Identify **ONE** measurement used for QUALITY of animal / raw product and one for quantity.	Identify **ONE** measurement used for QUANTITY of animal / raw product.	How is this live animal sold ? Eg auction, contract, they are vertically integrated, at the saleyards

3) **Ask a Farmer**: How do you prepare for or manage issues that could impact the quality or quantity of your on-farm product?

4) a) While exploring the production of your chosen product at the show, were you able to identify the governing body that oversees this industry?

b) If yes, what is the name of the governing body?

Follow Up Questions

1) **Compare the Breeds**: Using the information from your table, compare the two breeds in terms of their suitability and ease of on-farm management for meeting the specified market requirements. Be sure to include the relevant market specifications for the product in your comparison.

2) Describe one factor which could affect the ON FARM **QUALITY** of the product.

3) Describe one factor which could affect the ON FARM **QUANTITY** of the product.

4) Identify and describe one technology which can be used to assist in the production for the product ON FARM. *(for this you may need to go to the Woolworths Ag Discovery Pavilion)*

Off farm production – Paddock to Plate

PART A – Production/Supply Chain

Head to the Woolworths Ag Discovery Pavilion, where you'll find **two** opportunities to learn about the supply and processing chain for red meat.

For beef or lamb, speak with the MLA presenters and participate in their experience to gather information for completing the task below.

You can also visit the RAS Show Pies outside the Woolworths Ag Discovery Pavilion to observe the team making sausage rolls and pastry. Be sure to ask them questions about their methods for processing and value-adding the raw beef product.

Create a flowchart that outlines the process from raw product to final product. Your flowchart should include any associated industries involved in the process, as well as key management tasks (e.g., weighing and steps to process the final product).

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Flowchart that outlines the process from raw product to final product

Name of Product: _____

PART B – Value Adding

Head to the Woolworths Fresh Food Dome

1) a) Identify THREE (3) different PROCESSED products that come from a raw product. For each product.....
   a. Describe how the final processed product is different from the raw product.
   b. What sort of packaging is the processed product in ?

Product Name -

Product Name -

Product Name -

"Value Adding is in principle changing or adding to the raw product to make it more appealing to consumers or serve a specific purpose, with the goal of increasing profit to the farmer / processer"

2) For your product explain the importance of value adding.

3) ***Engage with the Vendor:*** *Ask what consumers are looking for when purchasing this product. If you prefer not to ask, observe how the product is processed, prepared, or displayed for sale.*

4) ***Reflect on Consumer Choices:*** *Consider what factors might influence a consumer's decision to buy this product. How might they take it home, prepare it, or cook it? What other aspects could impact their purchasing decision?*

5) Choose TWO (2) of your processed products and **describe** the different methods of promoting or advertising the product that you observed at The Show.

Product:

Product:

9.1 Plant / Animal Production HSC Outcomes (linked to the activities in the booklet)

H1.1 explains the influence of the physical, biological, social, historical and economic factors on sustainable agricultural production

Syllabus Outcomes: *This activity is designed to build background knowledge on soils, microbes, fertility, and plant production.*

Students learn about	**Students learn to**
The role of soil nutrient cycles in Australian agricultural systems including the nitrogen cycle and the carbon cycle	Illustrate the nitrogen cycle and the carbon cycle
The role of microbes and invertebrates in the decomposition of organic matter	Research using secondary sources the importance of microbes and invertebrates in decomposition and nutrient cycling

- To complete the activities, visit the Woolworths Ag Discovery Pavilion.
- Look for exhibitors showcasing sustainability and soil health.
- Pay attention to concepts such as regenerative agriculture or holistic farming, which may be featured on signage or discussed by presenters.

1) Visit the Happy Soils stall. This company is about creating a holistic approach to farming, agriculture and soil remediation. They produce and sell 100% organic biological fertilisers.

   Quote from the website – "*At Happy Soils, we recognise that embracing a biological approach to farming is key to unlocking higher yields and maximising profitability. By prioritising soil health and fostering ecosystem balance, you can cultivate a thriving agricultural environment that supports sustainable growth*"

   Note - Soil ecosystem balance relates to the soil microbes.

   Using the quote from Happy Soils above, discuss the importance of a biological approach to farming in achieving sustainable agricultural practices. In your response, consider how prioritising soil health and fostering ecosystem balance can contribute to higher yields and/ or profitability.

2) Happy Soils offers several programs to farmers. Choose **one** of the following programs and explain what it involves. Then, discuss how it would benefit a farmer:

- Enhance nutrient availability
- Promote biodiversity
- Enhance carbon drawdown

If this question cannot be completed while at the show, it can be completed using information from their website. https://happysoils.com.au/

3) Happy Soils develops organic biological fertilisers. Choose **one (1)** of their **named** fertilisers and describe its uses and benefits.

2) Create a mind map of the information gained about fertilisers from The Show.

When creating your mind map, ensure it highlights the connection between soil health, fertility, and successful plant growth.

Mock HSC questions

QUESTION: (6 marks)

Answer parts (a), (b), (c) and (d) in relation to an identified farm product.

Name of farm product: .....

(a) Identify ONE factor which influences a **named** quality criteria of the product. **2**

(b) Explain a management decision used by a producer of this farm product to meet a market specification. **3**

QUESTION CONTINUES OVER THE PAGE

(c) Outline, using an example, a method which can used to increase the financial return of the raw product through **off farm** processing. **3**

(d) **Identify** ONE piece of technology used on the farm and **explain** how it improves management or production. **4**

Marking Guidelines

(a) Identify ONE factor which influences a **named** quality criteria of the product.

Criteria	Mark
States a correct market quality criteria for the product and then identifies a factor which will influence the quality of the product – this can be ON or OFF farm.	**2**
States a reasonable factor which could affect the quality of the product, without linking to named criteria.	**1**

Possible Answers: *Answer will vary.*

If the quality is based on percentage of protein or fat in the milk. then the diet of the animal can affect the quality criteria.

If the quality criteria is the size of the egg, then diet or living conditions or age of the chicken can impact the egg size.

If the quality criteria is micron or staple length, the environmental conditions of the sheep will impact wool growth and its quality. Diet will also affect this.

(b) **Explain** a management decision used by a producer of this farm product to meet a market specification.

Criteria	Marks
Explains clearly management decision that LINKS to the STATED correct market specification.	**3**
Outlines or describes a management decision that may link to a market specification.	**2**
A reasonable attempt at identifying a management decision or market specification for the product	**1**

Possible Answers: *Could use same criteria as above OR could use a market specification that is needed after slaughter eg fat depth, fat colour, muscle colour / quality, marbling, carcase weight. The protein and fat % of milk at processor.*

Management decisions will be linked to breed of animal, diet – this will include pasture management, when to mate, supplementary feeding. Ensure health.

(c) Outline, using an example, a method which can used to increase the financial return of the raw product through off farm processing.

Criteria	Marks
Clear outline of processing / Value adding (need to use the term) of the product. Answer must have outline of how the raw product is value added – name of "changed" product.	**3**
outline of how the raw product is value added – name / type of "changed" product.	**2**
Reasonable attempt a showing how can increase the financial return.	**1**

Possible Answers:

Answers MUST have an example with the name/type of the processed and link this to off farm changes of the product.

It can be as simple as bottling / packaging / processing the meat into cuts, smaller pieces. Adding flavouring.

(d) **Identify** ONE piece of technology used on the farm and **explain** how it improves management or production.

Criteria	**Marks**
• Identify a technology / ideally its name. • A brief description of what the technology is used for / does • Clearly LINKS this to improving or efficiency of either ON FARM management or OFF FARM production	**4**
• Identify a technology / ideally its name. • MAY have a brief description of what the technology is used for / does • Attempt at linking the technology to improving or efficiency of either ON FARM management or OFF FARM production	**3**
• Identify a technology / ideally its name. • MAY have a brief description of what the technology is used for / does **OR** states how it links to management (link is not clear)	**2**
Reasonable attempt at the question	**1**

Possible Answers:

Answers will vary depending on technology. Need a strong link between technology and improvement in management or production

EID tags and auto crush – enables a farmer to work on their own or decreases the time that is taken to do management operations on farm.

Oestrus monitors – enables a farmer to know the optimum time to impregnant cows – makes it easier to have all births around the same time.

Robot milking machines – gives farmer time to work on other jobs. Reduces stress on animal and in turn increases milk production. Highlights mastitis early – reduces milk losses.