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9-10 | LESSON PLAN

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Lesson 3

The marketing and supply chain

AUSTRALIAN CURRICULUM CONTENT



Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises. (ACTDEK044, AC9TDE10K04)

Develop project plans for intended purposes and audiences to individually and collaboratively manage projects, taking into consideration time, cost, risk, processes and production of designed solutions. (ACTDEP052, AC9TDE10P05)

LESSON OBJECTIVE

Students will learn how livestock can be sold, and examine the marketing and supply chain of red meat.



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Lesson 3

LESSON OVERVIEW

Activity 3.1	Selling systems	25 mins
Activity 3.2	The supply chain 360° tour	30 mins
Activity 3.3	Domestic and international markets	30 mins
Activity 3.4	Online learning task: The importance of the National Livestock Identification System	10 mins

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Student resources	6-12
Answers	13-15



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Lesson 3

Resources and equipment

ACTIVITY 3.1 – Selling systems

1. Worksheet 3.1a – *Selling systems*.
2. Computer/digital device access.
3. [Selling systems](#) or QR access codes.

ACTIVITY 3.2 – The supply chain 360° tour

1. Worksheet 3.2a – *The supply chain 360°*
2. Computer/digital device access.
3. [Australian Beef Paddock to Plate Story | 360° video](#) (6.22) or QR access codes.
[Australian Lamb Paddock to Plate Story | 360° video](#) (7.10) or QR access codes.
4. A3 paper/butcher's paper and markers.

ACTIVITY 3.3 – Domestic and international markets

1. Worksheet 3.3a – *The domestic and international markets*.
2. Computer/digital device access.
3. [International markets](#) or QR access codes.
4. [Markets and Profits | Going into Goats](#) (4.46).

ACTIVITY 3.4 – Online learning task: The importance of the National Livestock Identification System

1. Computer/digital device access of [Lesson 3 Online learning task](#).
2. [National Identification Livestock System](#) (1.35).

ADDITIONAL READING/RESOURCES

- [Live exports and animals welfare](#)



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Lesson guide

ACTIVITY 3.1 – Selling systems

- Facilitate a discussion about how livestock are sold in Australia and record ideas in a central area (Suggestion: if students are unfamiliar with any selling methods, encourage them to think of the ways that cars can be sold – saleyards, privately, online, etc).
- For the selling methods listed, identify any advantages and disadvantages of each type of sale (or lead students to discuss the advantages and disadvantages of an auction compared with a private sale).
- Read Worksheet 3.1a – *Selling systems* and support students in understanding the descriptions in the table.
- In groups, allow computer/digital device access and provide students with time to view the source/QR code [Selling Systems](#) to determine the types of systems available for the sale of cattle, sheep and goats within Australia. A yes or no should be placed in the relevant sections of the table. (Answers page 13)

ACTIVITY 3.2 – The supply chain 360° tour

- Access the source/QR code to observe a visual account of the production process* from paddock to plate of either cattle or sheep. Encourage students to take notes about the processes they observe, the occupations they see, any technologies associated with the chain and the role of these technologies.

[Australian Beef Paddock to Plate Story | 360° video.](#)

[Australian Lamb Paddock to Plate Story | 360° video.](#)

**Videos contain content of animal carcasses being assessed and processed. Preview footage to determine suitability for own classes.*

- Allocate students into groups and provide them with A3 paper/butcher's paper and markers. Using their notes, students design a flowchart to represent the supply chain and all the processes and technologies they observed. Provide students with computer/digital device access to revise the tour during their design task. Encourage students to include drawings where possible, to supplement their representations. (Answers page 14)
- On completion, generate a discussion about:
 - What were the steps in the chain?
 - Who was involved in each of these steps?
 - Were there any processes that you were unaware of prior to this tour? Identify them.
 - What technologies did you observe during the supply chain?
 - What was the role of these technologies?

Lesson guide continued next page



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Lesson 3

Lesson guide *continued*

ACTIVITY 3.3 – Domestic and international markets

- a. Generate a discussion about where red meat products are distributed after processing. Record student ideas in a central area.
- b. Discuss the different places that red meat can be sold and purchased (cooked and uncooked) in Australia (domestically).
- c. Students generate a list of places of purchase on Worksheets 3.3a – *The domestic and international markets*. (Answers page 15)
- d. Allow students computer/digital device access to view the source/QR code (page 6) to complete part b) of their worksheets.
- e. Students locate each international location pinned on the map and annotate two points of information/data focused on the corresponding location. (Answers page 15)
- f. Conclude the activity by showing students the media clip [Markets and Profits | Going into Goats](#) (4.46) to allow them to view an alternative red meat commodity within Australia.

ACTIVITY 3.4 – Online learning task: The importance of the National Livestock Identification System

- a. Students access Online learning task 3 and complete the provided activities focused on the importance of the National Livestock Identification System in the marketing and supply chain. (Answers page 16)



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Lesson 3

Student resources

ACTIVITY 3.1 – Selling systems

Worksheet 3.1a	Selling systems
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ACTIVITY 3.2 – The supply chain 360° tour

Worksheet 3.2a	The supply chain 360° tour	
QR Access Codes		
Activity 3.1	Selling systems 	
Activity 3.2	Australian Beef Paddock to Plate Story 360° video 	Australian Lamb Paddock to Plate Story 360° video 
Activity 3.3	International markets 	

ACTIVITY 3.3 – Domestic and international markets

Worksheets 3.3a	The domestic and international markets
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ACTIVITY 3.4 – Online learning task: The importance of the National Livestock Identification System

Lesson 3 Online learning task	The importance of the National Livestock Identification System
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Worksheet 3.1a

Selling systems

There are various ways that sheep, cattle and goats can be sold in Australia.

Producers need to evaluate the options for selling livestock carefully. Systems vary in their risk, profitability and convenience. Meeting market specifications (the qualities of the livestock being sold) will help producers to maximise returns and gain a reputation as a reliable supplier. Producers can remain well informed of market trends and movements. The National Livestock Reporting Service (NLRS) provides information designed to keep producers informed of market movements.



The fluctuations of prices at **saleyards** can occur quickly and price is impacted by seasonality (e.g. drought and feed availability), how many livestock are at the saleyard on a given day and the number of buyers at the saleyard.

AuctionPlus is an online auction system. This method of selling livestock means that the animals don't have to leave the farm and travel large distances before they are purchased.

Selling livestock by the '**over the hooks method**' (animals are processed and purchased at the abattoir), means that buyers can see the quality of the meat that they are purchasing. This method results in producers being rewarded with higher profit for meeting desirable specifications, but alternatively, if they fail to meet quality standards, their profits will be reduced.



- Read the description of each selling system available in Australia. Highlight the name of any selling system that is unfamiliar/new.
- Access the [Selling systems](#) link/QR code and determine the systems available to Australian cattle, sheep and goat producers by placing a yes or no in the columns of the table Selling Systems.

Worksheet 3.1a continued next page




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Worksheet 3.1a continued

Worksheet 3.1a

	Description	Cattle Yes or No	Sheep Yes or No	Goats Yes or No
Saleyard	Livestock are transported to saleyards and sold to the highest bidder.			
Meat Standards Australia (MSA)	Livestock eligible for this sale are sold only through MSA licensed saleyards. Producers and agents must be registered by Meat & Livestock Australia.			
Paddock sales	Livestock are inspected on their property by buyer or an agent and sold in the paddock.			
Stockyard sales	Livestock are weighed, graded and priced for sale at the stockyards.			
Over the hooks	Livestock are processed at the abattoir and assessed. Buyers purchase at the abattoir after processing.			
AuctionsPlus	Livestock are sold via an online auction.			
Forward (price) contracts	A seller and a buyer agree on a product (amount and standard) at an agreed price for a future point in time.			
Producer alliances	A group of producers work together to provide products to a particular market.			
Value-based marketing	Producers are paid on the value (quality and quantity) of the product and the end user.			
New selling options	A payment system based on lean meat yield.			



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Worksheet 3.2a

The supply chain 360° tour

a. Access the source/QR code and view either the beef or lamb tour. Record notes about the processes from the start to the finish of the supply chain. Also include:

- the occupations involved
- the technologies associated with steps in the chain, and
- the role of these technologies.



[Australian Beef Paddock to Plate Story | 360° video](#)



[Australian Lamb Paddock to Plate Story | 360° video](#)



b. After viewing the tour, in groups, design a paddock to plate flowchart identifying the steps, people and technologies involved in the supply chain (include text and images).



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Worksheet 3.3a

Domestic and international markets

The domestic market

The Australian domestic market is the largest market for Australian beef and sheepmeat.

- a. Identify places that red meat (uncooked and/or cooked) can be purchased in Australia.

The international market

Australia exports red meat to over 100 countries, representing over 60% of the industry's total production.

Australia's reputation for producing trusted high quality red meat products underpins some of the world's finest red meat. This is largely due to the comprehensive systems of food safety, quality assurance and traceability from farm to plate.

To uphold this reputation, Meat & Livestock Australia (MLA) and the wider red meat industry have implemented a number of traceability and quality assurance programs.

- b. Access the link/QR code to learn about some of the [international markets](#) that Australia exports red meat to.





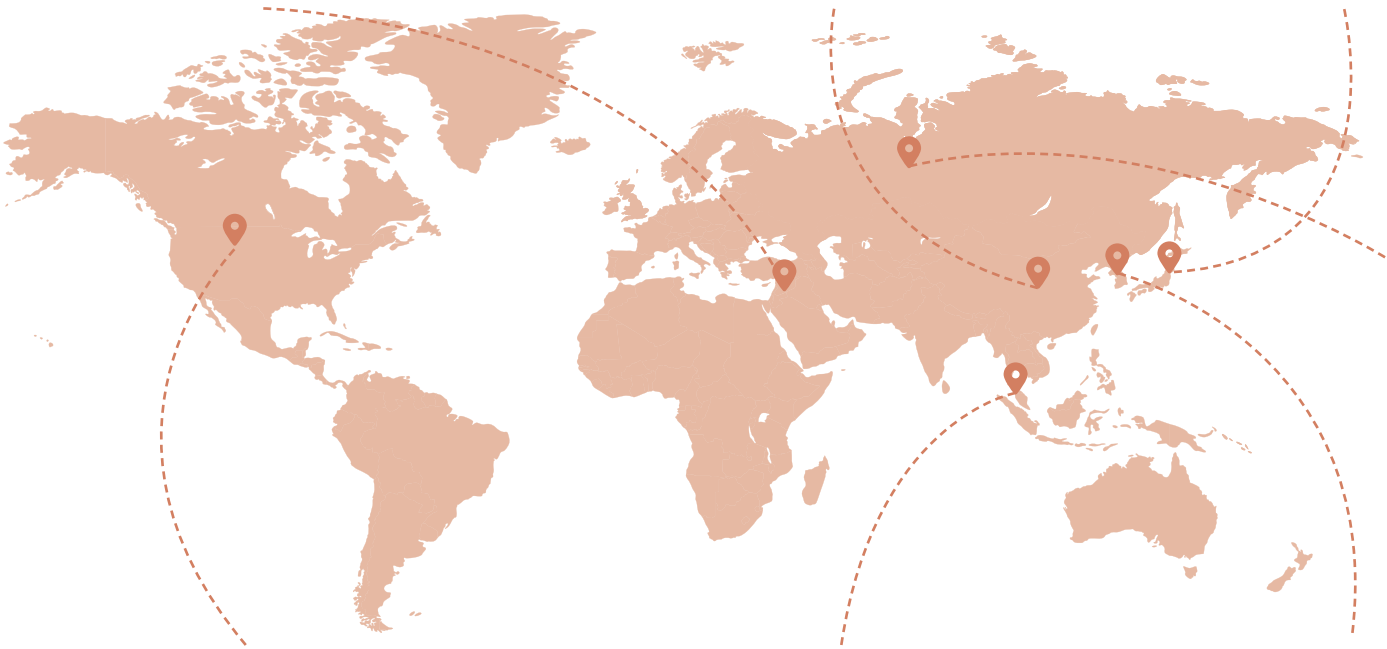
c. Scan the QR code and click on each of the pinned locations. Annotate 2 points of information/data about each area. Europe and Russia have been completed as an example.



Middle East and North Africa

China

Japan



Europe and Russia

1. Highly restricted by quotas.
2. Maintaining and improving access is a key strategy.

North America

South-East Asia

Korea



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9-10 | WORKSHEETS

Worksheet 3.4

Online learning task: The importance of the National Livestock Identification System

- a. Access Online learning task 3 and complete the provided activities focused on the importance of the National Livestock Identification System in the marketing and supply chain.




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Activity 3.1

Selling systems

	Description	Cattle	Sheep	Goats
		Yes or No	Yes or No	Yes or No
Saleyard	Livestock are transported to saleyards and sold to the highest bidder.	Yes	Yes	Yes
Meat Standards Australia (MSA)	Livestock eligible for this sale are sold only through MSA licensed saleyards. Producers and agents must be registered by Meat & Livestock Australia.	Yes	No	No
Paddock sales	Livestock are inspected on their property by buyer or an agent and sold in the paddock.	Yes	Yes	Yes
Stockyard sales	Livestock are weighed, graded and priced for sale at the stockyards.	Yes	No	No
Over the hooks	Livestock are processed at the abattoir and assessed. Buyers purchase at the abattoir after processing.	Yes	Yes	No
AuctionsPlus	Livestock are sold via an online auction.	Yes	Yes	No
Forward (price) contracts	A seller and a buyer agree on a product (amount and standard) at an agreed price for a future point in time.	Yes	Yes	No
Producer alliances	A group of producers work together to provide products to a particular market.	Yes	No	No
Value-based marketing	Producers are paid on the value (quality and quantity) of the product and the end user.	Yes	No	No
New selling options	A payment system based on lean meat yield.	No	Yes	No



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Activity 3.2

The supply chain 360° tour

Australian Beef Paddock to Plate Story | 360 video

Steps in supply chain	Occupations	Technology	Role of technology
On farm	Farmer and workers	Vehicles, helicopters, motorbikes	Mustering and handling
Cattle yards		NLIS electronic identification tags	To keep track of the animals, traceability
Transport	Truck driver		
Feedlot	Feedlot manager and workers	Feeding machine	Fast distribution of feed to animals
Abattoir	Processors	Chilling and processing machinery	To ensure best conditions (health and safety of meat), to ensure quality is maintained, to process meat efficiently to decrease time and handling and improve safety
Processing			
Grading of carcase			
Cutting (primal and sub-primal)			
Packaging			
End supply (export, restaurants, butchers)	Chef, consumers		

Australian Lamb Paddock to Plate Story | 360 video

Steps in supply chain	Occupations	Technology	Role of technology
On farm	Farmer and workers	Vehicles, motorbikes	Mustering and handling
Transport	Truck driver		
Saleyard	Auctioneer, agents, buyers		
Holding yards	Handlers		
Abattoir	Processors	Chilling and processing machinery including x-ray and robotics	To ensure best conditions (health and safety of meat), to ensure quality is maintained, to process meat efficiently to decrease time and handling and improve safety
Processing			
Grading/inspection			
Cutting (primal and sub-primal)			
Packaging			
End supply (export, restaurants, butchers)	Chef, consumers		



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Activity 3.3

Domestic and international markets

Worksheet 3.3a - The domestic and international markets

a. Butchers, supermarkets, markets, farm gates, online stores, cooperatives, restaurants, cafes.

c.

Middle East and North Africa

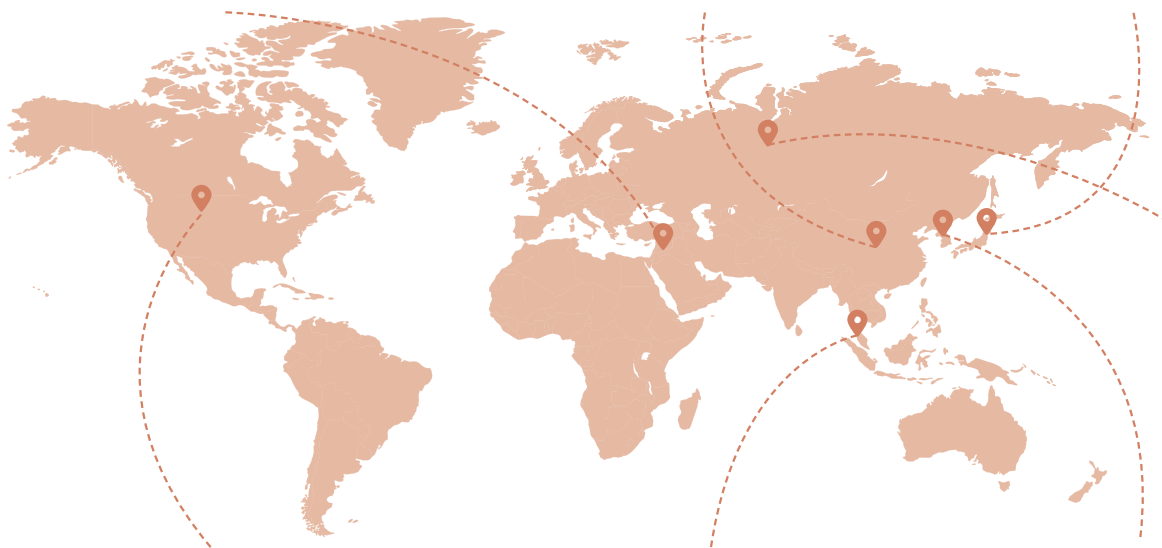
1. All cattle, sheep and goats processed in Australia destined for the Middle East are slaughtered under the Halal program.
2. Preference for sheep carcasses that are 10-15kg range.

China

1. Australia is the 4th largest beef and largest sheepmeat export market by volume.
2. 148,000 tonnes of beef and 60,000 tonnes of sheepmeat to market in 2015.

Japan

1. Critically important partner for the Australian beef industry, reigning as the top export destination since early 1990's alongside of US.
2. Also a key market for Australian lamb.



Europe and Russia

1. Highly restricted by quotas.
2. Maintaining and improving access is a key strategy.

North America

1. MLA is supporting NA to develop red meat exports.
2. Trade marketing activities are focused on building awareness of red meat.

South-East Asia

1. Australia was the largest supplier of Indonesian beef imports (98%).
2. Sheep meat imports 100% during Jan-March 2015.

Korea

1. Korea is Australia's 3rd largest beef export market taking approx 150,000 tonnes in 2014.
2. The sheepmeat market in Korea is also growing at a rate of 47% in 2014.



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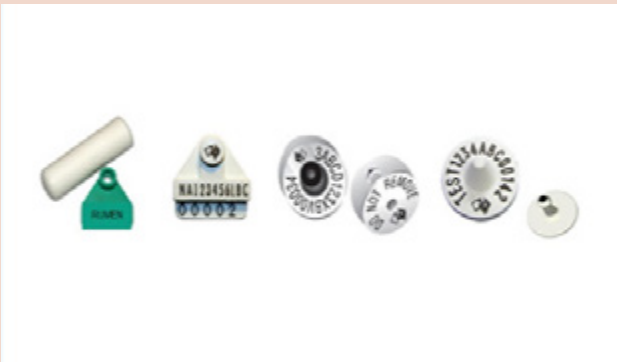


Activity 3.4

Online learning task: The importance of the National Livestock Identification System

3. Cattle breeder and post-breeder devices¹ (see [references](#)).

Cattle breeder devices



Cattle post-breeder devices



4. If an animal is moving off its property of birth, a breeder device is used. If a tag is lost and the animal is no longer on its property of birth, a post breeder device is used.