



Paddock to Plate



CARD GAME
YEAR 7-10



Australian Good Meat
Education resources
are developed by



Farm (paddock)



Producers care for their animals in specific ways to produce the best meat possible for consumers.



Considerations:

- Producers select species and breeds that are suited to their location.
- Producers feed livestock nutrition that will produce good quality meat.
- Producers carefully consider the welfare of their animals so they are stress-free, protected from disease, and have all of their needs met.
- NLIS tags are used to identify individual animals.



Saleyard



Livestock travel to a central location, are auctioned in a live environment and sold to the highest bidder on the day.



Considerations:

- The welfare of animals must be carefully maintained at the saleyards to reduce the chance of stress and bruising. These factors impact meat quality and the potential sale price.
- Other domestic selling systems include: AuctionPlus, over the hooks, paddock sales, forward contracts, alliances and value-based marketing.



Feedlot



Some animals spend a period of time at a feedlot to increase their weight, muscle and fat content to meet market specifications.



Considerations:

- Livestock are provided with water and a specific diet (ration), which generally consists of a mix of barley, wheat, sorghum and other additives.
- 'Finishing' cattle in a feedlot results in increased muscle and fat deposition to allow the animal to reach a specific weight and condition score.
- Animal welfare standards must be maintained, including protection from harsh environmental conditions.
- A new technology, BunkBot (feed consumption and monitoring device), can be used at a feedlot.



Holding yards and abattoir



The area where livestock are housed, prior to moving into the main processing area of the abattoir.



Considerations:

- Animals are held in holding yards at the abattoir for a short period of time before processing.
- Low-stress stock handling is used to minimise stress and potential bruising.
- Animals are provided with all their needs before moving into the main processing area.
- Carcasses are processed in the abattoir in a series of steps before packaging the final products.



Packing and cold store



Red meat is packaged, labelled and temperature controlled to maintain product quality, extend shelf life and maintain food safety.



Considerations:

- Labelling provides important information to consumers such as use-by and best-before dates.
- New packaging technologies are being developed to increase shelf life, reduce the use of plastic and develop more sustainable packaging.
- Red meat must be stored at optimal temperatures to obtain the maximum shelf life without creating a food safety risk to consumers.



Domestic market



Red meat products (beef, sheep and goat meat) are produced in Australia and are marketed and sold to buyers and consumers in Australia.



Considerations:

- The Australian domestic market is the largest market for Australian beef and sheepmeat.
- Almost half a million people are employed in Australia's meat and livestock industry.
- The Australian red meat industry cares about animals and the planet. The industry aims to have a positive impact on the environment, with the goal of being carbon neutral by 2030.



Domestic retail & food services



Domestic retail includes sales to restaurants, supermarkets, butchers, markets, cafes etc. These sales are for consumers to either purchase and prepare themselves, or to have the product prepared for them.



Considerations:

- There are many regulations governing the sale of red meat to retail outlets, restaurants and cafes.
- Safe storage temperatures and labelling guidelines must be strictly adhered to and retailers must ensure that products are sold before 'best-before' or 'use-by' dates.
- NLIS is crucial at this stage. The technology enables the industry to trace individual animals through their movement in the supply chain, and manage health or safety issues.



Consumer (plate)



People who purchase and consume the meat produced by the Australian red meat industry.



Considerations:

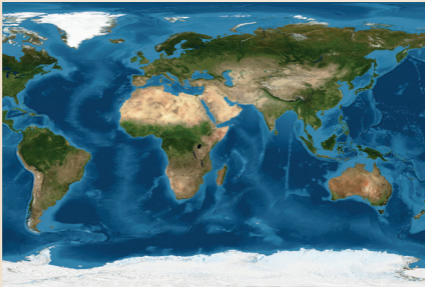
- Consumers select the type of red meat (beef, sheep or goat), based on their specific needs.
- Some cuts of meat are more suited to particular preparation techniques, e.g. frying, roasting, stir frying, etc.
- Many factors, including the cost, taste, supply and nutritional information, can contribute to consumers purchasing choices.



Export market



Australia exports processed red meat to over 100 countries. MLA has offices in China, Europe, Russia, North America, the Middle East, North Africa, South East Asia, Korea and Japan to promote and grow demand for Australian red meat.



Considerations:

- Australian farmers produce more cattle, sheep and goats than required to feed the domestic population.
- Exports are an important part of Australia's livestock industry.
- The majority of Australian meat is exported as freshly processed/chilled meat.
- Australia exports to a number of different markets, the largest of these being Korea, Japan and America.



Export retail & food services



Australia exports processed red meat to many overseas countries and their retail and food services.



Considerations:

- Strict food handling procedures and regulations ensure that red meat is safe for consumption.
- NLIS is crucial at this stage. The technology enables the industry to trace individual animals through their movement in the supply chain and manage any health or safety issues quickly if detected.



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Live export market



Livestock are moved from Australia to other overseas countries for people to purchase.



Considerations:

- This industry supports the livelihoods of many Australians, and creates employment in overseas destination markets.
- During voyages, animals are cared for by accredited stock handlers, and during longhaul voyages, an Australian Government accredited veterinarian is also present.
- Livestock exports are highly regulated, and all processes from the farm to the point of slaughter overseas have to meet or exceed animal welfare standards.



Live export retail & food services



Overseas consumers purchase Australian red meat that has been slaughtered and processed in their own country.



Considerations:

- Reasons for preferring live animals over chilled meat include religious or cultural reasons, and lack of infrastructure for fresh or frozen storage.
- Red meat is generally purchased and consumed within days of processing.



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Producers & Farm Workers



Producers raise livestock, such as cattle, sheep and goats for profit. A farm worker is someone who performs labour on a farm.



Considerations:

- Producers manage and coordinate all farming operations related to raising livestock that are intended for specific markets.
- Producers and farm workers care for the health and welfare of their animals, minimising stress to produce healthy and profitable products.
- Australian red meat producers carefully consider all aspects of sustainable production (economic, environmental and social).

Stock feed suppliers & manufacturers



Provide the supplementary feed that is needed by livestock such as cattle and sheep.



Considerations:

- Grains and supplementary feed are mixed by manufacturers and can be purchased directly, or from suppliers.
- Supplementary feeding can be used in regular grazing systems to help meet production requirements or reserved for times of drought or feed shortages.
- When supplementary feeding is undertaken, the nutritional requirements of the animal (as a ruminant) must be considered and an appropriate ration devised accordingly.

Stud farms



Breed high-quality livestock with the objective of selling stud males and females to other producers, who then use these animals for their own breeding programs.



Considerations:

- Selective breeding relies on targeting particular characteristics (heritable genetic traits) to produce desirable offspring.
- Studs carefully record the pedigree information and measurable traits of all the animals that are bred on their farms.
- This information allows the producers who purchase stud animals to better predict and target characteristics within their own animal breeding programs.
- E.g. Australian Sheep Breeding Values (ASBVs) data are recorded by stud farmers and can help producers predict the consistency of the animals they produce for traits such as growth, wool, reproduction, health and carcase characteristics.

Animal Welfare Officer



Oversee the humane handling of animals.



Considerations:

- Animal Welfare Officers are employed in different areas of the supply chain, such as feedlots.
- Officers have the responsibility of monitoring and supervising animal welfare practices and standards.
- They also educate workers on methods of reducing animal stress and improving animal welfare.

Agronomist



A scientist who studies soil management and crop production.



Considerations:

- Agronomists are experts in soil management, as well as plant growth and development.
- Agronomists observe plant productivity, test soil characteristics, review scientific research, and assess pest and disease issues.
- They use this knowledge to advise farmers on ways to increase the productivity and sustainability of their plants and soils. These areas of production are crucial to growing productive plants for livestock and humans to consume.

Truck Driver



Livestock are transported by drivers in specially designed trucks or transport trailers, from one location to another.



Considerations:

- During transportation, animals are managed in a way that reduces stress and minimises any risks to their welfare.
- Animals are loaded so that they have enough room to be comfortable, but are close enough to not get knocked around during transit.
- Drivers and producers need to comply with strict standards and guidelines for the land transport of livestock.

Auctioneer



A livestock Auctioneer sells animals at auctions, accepting bids from interested buyers.



Considerations:

- An Auctioneer conducts livestock auctions at the saleyards or on a vendors property.
- They can also be responsible for a range of other tasks associated with the auction process, including reconciling livestock records, completing sales documentation and arranging delivery of livestock to the buyer.

Handler



Handlers manage livestock and may be responsible for coordinating feeding, watering, herding, grazing rotations, disease management (vaccinations and drenching) and loading livestock for sale.



Considerations:

- Successful handling of livestock requires an understanding of their natural behaviour and the ability to recognise and interpret animal actions.
- Livestock handling should aim to minimise stress and ensure the safety of both the livestock and the operator.
- Successful livestock handling can have a significant effect on animal performance and meat quality.

Veterinarian



A qualified person trained in the medical treatment and care of animals.



Considerations:

- Veterinarians work closely with producers to improve livestock health, welfare and productivity.
- They develop and implement health plans that include preventive measures for pests and diseases, such as vaccinations and oral medicines.
- Livestock Veterinarians are also able to advise on breed specific information and reproductive care.

MSA Grader



Inspect the quality of beef and lamb by assessing the carcass. Responsible for measuring characteristics against a number of defined criteria to assign an eating quality grade for each individual cut.



Considerations:

- MSA accredited Graders collate information from the producer, supervise processing standards, and collect individual carcass attributes using a uniform set of standards.
- Results are allocated to an individual carcass, and the outcome results in eating quality information for individual cuts, combined with days of ageing required, and recommended cooking methods.

Processor



Divides whole carcasses by boning and slicing meat for further processing.



Considerations:

- Meat Processors perform a wide range of tasks, including handling livestock, slaughtering and processing the carcasses, operating processing and rendering equipment, dispatching products, and keeping records.

Butcher



A person whose job is to cut, section, value add and then sell meat to the food service industry, or directly to consumers.



Considerations:

- Butchers cut, grind and prepare meat for sale. They also clean and maintain tools and equipment.
- Butchers have an excellent knowledge of livestock anatomy and meat cutting techniques.
- They must also have specific knowledge of food hygiene and safety requirements.

Chef



A professional cook who prepares meals for consumers in the food service industry.



Considerations:

- A chef's responsibilities include planning menus and ensuring food quality and taste is of the highest standard.
- They also may manage the inventory of stock, order raw materials, control budgets and manage waste minimisation.
- Maintaining health and hygiene in the kitchen is crucial to this occupation.

Name of technology/innovation:



Description:

Picture or drawing:

Considerations:

National Livestock Identification System (NLIS)



Australia's system for the identification and traceability of cattle, sheep and goats.



Considerations:

- Tags are attached to an animal's ear or via a rumen bolus.
- Farmers use the tags to identify individual animals and monitor and record their productivity over time.
- The red meat industry uses NLIS to trace individual animals throughout their lives and monitor their movement through the supply chain, allowing contact history between animals to be determined.
- Consumers can have confidence in the integrity and safety of the red meat they purchase, knowing that any health and safety issues can be traced back up the supply chain quickly.

Meat & Livestock Australia



For instructions and use of
these cards in an educational
setting, please visit:

bit.ly/3CyeJex

AC9TDE8K01, AC9TDE8K04, AC9TDE8P01,
AC9TDE8P02, AC9TDE8P05, AC9TDE10K04.

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Australian Beef Paddock to Plate Story 360° video



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